THE Journal of the Kansas Medical Society

TOPEKA, KANSAS

JUNE
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VOL LVII
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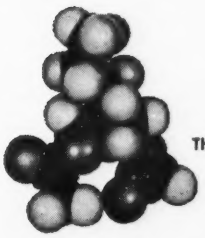

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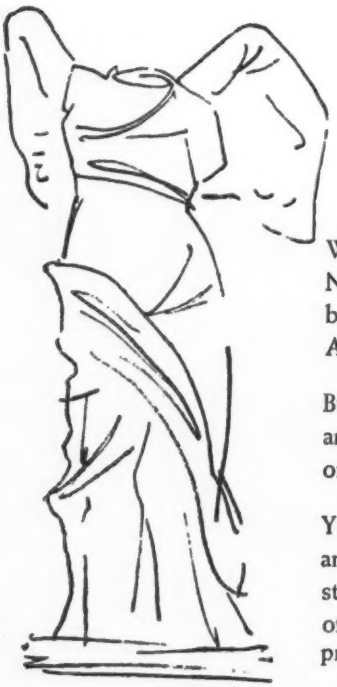

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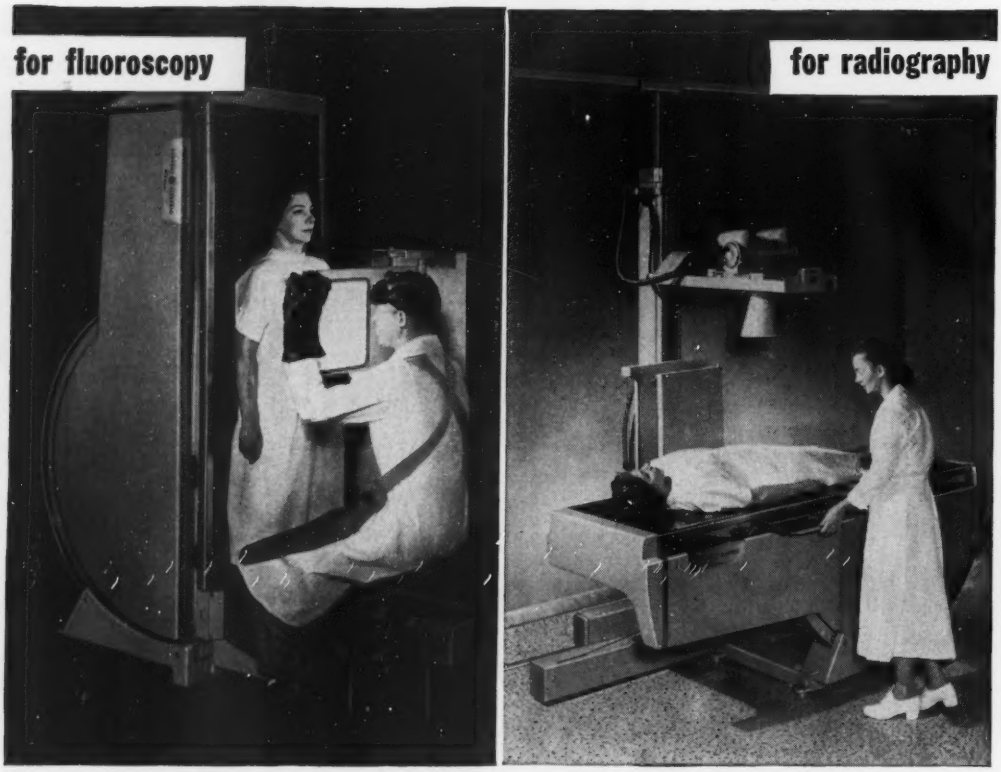

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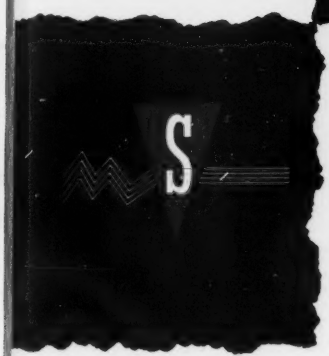

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1. Seifter, J., et al.: To be published. 2. Fazekas, J.F., et al.: M. Ann. District of Columbia 25:67 (Feb.) 1956. 3. Mitchell, E.H.: J.A.M.A. In press.

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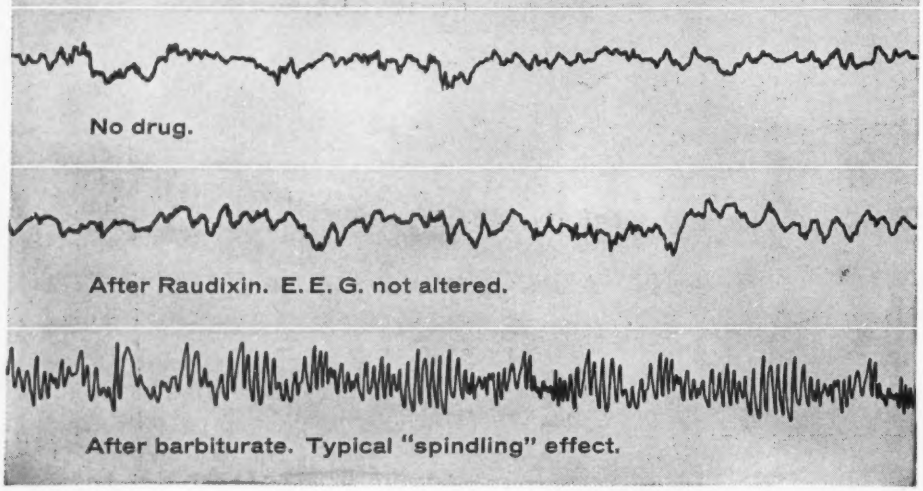

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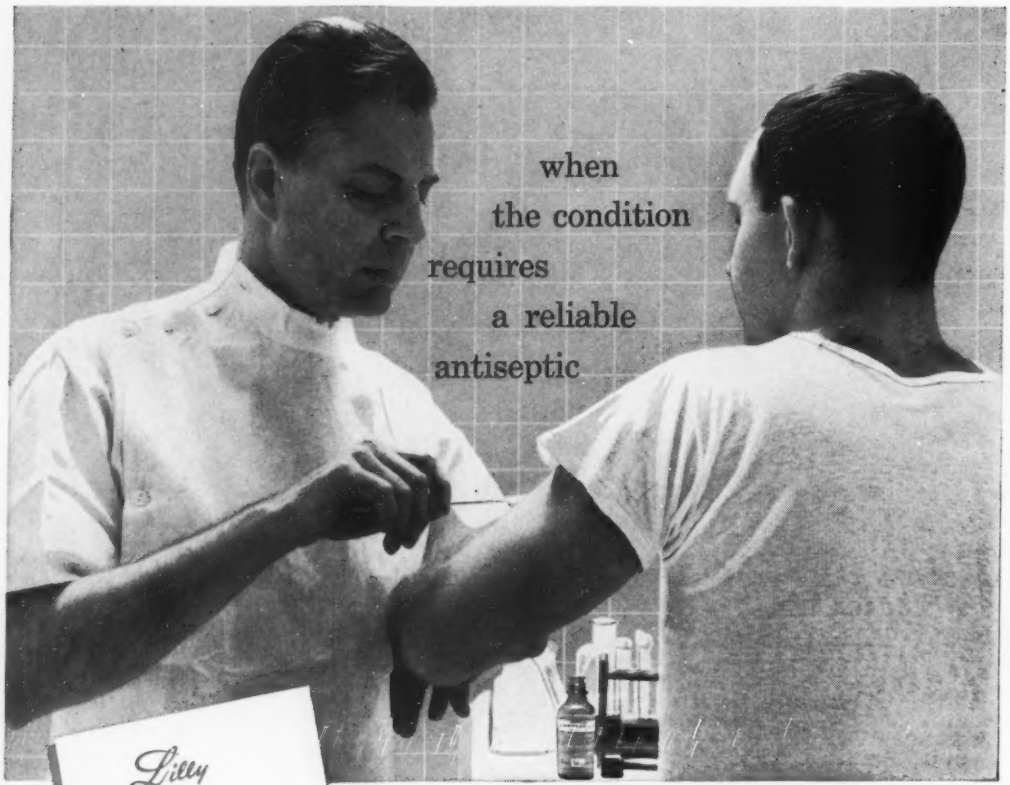

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Volume LVII **JUNE, 1956** **No. 6**

Special Issue on Trauma

The 1955 meeting of the Kansas Chapter of the American College of Surgeons, in keeping with the College emphasis on trauma, was devoted to various aspects of that subject. The program was arranged by Dr. John A. Grove, chairman of the State Committee on Trauma.

During the presentation of the papers on that program, it was evident that they were on timely subjects which would be of interest to a great number of the physicians of Kansas. Thus the idea of this issue on trauma was conceived.

The papers by Doctors Grove, Butcher, Speirs, and Hiebert are essentially as presented on that occasion, and the one by Dr. Wier was given in a modified form. The contributions of Doctors Williamson and Ashley were solicited to round out the symposium.

The Editorial Board is pleased to be able to present this special issue and hopes that it will prove to be interesting to a large cross-section of the membership of the Society. Appreciation is extended to all the authors who made it possible.

Transportation of Injured

If You Are Injured near Your Home, Will You Be Satisfied with the Available Ambulance Transportation?

JOHN A. GROVE, M.D., ***Newton***

It is a pleasure, as chairman of the Kansas Committee on Trauma of the American College of Surgeons, to present this panel today. One of the most active committees of the American College of Surgeons is its Committee on Trauma.

Briefly, I wish to review and refresh your knowledge of the work of this committee since its inception in 1922. It was at first a small group named the Committee on Fractures. Among the men most active in its work, the name of Charles L. Scudder stands out. There were, and are still, many other men prominent in the work of the College of Surgeons who have served on the committee. This first group may be called the men of the era of "splint them where they lie." In 1939 the committee was amalgamated with the Committee on Industrial Medicine and Traumatic Surgery, under the name of the Committee on Fractures and Other Trauma. In 1950 the name was changed to the Committee on Trauma, and its membership was enlarged to 45 men.

The objectives of the committee are to improve and develop the teaching of trauma in the United States and Canada, and to improve the transportation and care of the injured person. As a means of carrying out the objectives, regional committees have been established in as many parts of the United States and Canada as possible; there are 12 sections, each of which is made up of three, four, or five states. Over each section, the chief acts as advisor and as director of the various states' activities. There is no standard procedure as to how each state works out its problems of organization. Local regional committees in the larger centers may be organized. In fact, throughout the east, there are many local committees at work. Membership is not limited to members of the College.

In Kansas, your committee has made its prime objective the improvement in the management of injured. This is to be carried out through three objectives: (1) first aid; (2) emergency room management, and (3) definitive treatment.

I wish to speak briefly today about one part of first aid—the transportation of injured in Kansas. There are times when I feel a gentle needling does a great amount of good so if, as I proceed, you feel some mild sticks, I hope you will take it in the way that it is intended, to stimulate some action.

Recently, in a nationally-published magazine, there was an article by Greer Williams entitled "Let Those Crash Victims Lie." It was blunt in saying that more damage can at times be done in transportation to the hospital than at the time of the crash. Our people need more education of this type. However, let's look at the evidence.

The "Dr. George Curry" quoted in the article is from Flint, Michigan. He is chairman of the subcommittee on transportation of the injured for the Committee on Trauma of the College. Recently he made a survey of transportation of the injured in 28 large and 34 smaller cities across the United States. These 62 cities, large and small, covered one-fifth of the population of the present United States census.

Of the larger cities, 56 per cent were rated good for the transportation of the injured, 15 per cent were excellent, and 29 per cent were fair to poor. Of the smaller cities, and there were four that were surveyed in Kansas, 46 per cent were good, 25 per cent excellent, and 29 per cent fair to poor. Comparing metropolitan areas with the more rural population, in which class we fall, there seems to be no great variation in this report.

The situation here is evaluated on the following (and I want you to think about this question, because I want you to answer it in your own minds): "Do you believe, if you sustained a serious accident in your own city, that you would be transported to a hospital in a way conducive to your promptest recovery?"

Think about that a minute! Figure out your own ambulance service and your own transportation services. You're knocked out, you have a head injury, you have no direction over events. You also have a fractured femur. Do you think, in your own city, you would be transported to a hospital in a way conducive to your promptest recovery? I wonder, in answering that question honestly, whether all of us aren't just a bit worried about the answer.

Now, just to make you feel a bit better, in Chicago, with medical facilities and teaching institutions, the survey in 1954 showed that 69 per cent of emergency room cases of trauma got to the emergency room without organized help.

Let's look again at Kansas. There are almost no municipal ambulances in Kansas. Patients reach the

emergency rooms by private car, by private ambulance, or they walk in. An answer from a Kansas town surveyed by Dr. Curry included this comment, "Most of our cases of highway trauma occur in isolated areas, remote from people or telephones. It has been almost impossible for an ambulance or medical care to beat the first well-meaning persons to the scene and keep those individuals from bundling the living or the dead into the car and racing to a hospital."

The obvious question, of course, is how much added trauma has needlessly occurred. I know that if you are in the emergency rooms of our hospitals each day, you see accident cases and cases of trauma of all kinds brought in with hurry and rush by well-meaning individuals, but certainly adding to the injury. Now, a cynic among us might pose the question, "What if the average doctor did reach the scene? How much first aid can and will he practice? Will he splint those fractures?"

Obviously the doctor would stop major bleeding. Among the war-trained doctors, the aid will be good and the patient fortunate; but I wonder about the young men just out of medical school. Has their training been as good as it should be, in medical school and in their internships? What about the older doctors? I'll just leave that with a question mark.

What happens if the average Kansas ambulance reaches the scene? Less than one-third of the ambulances in Kansas are equipped with splints. You look in the ambulances of your home town (and that includes the metropolitan centers and on down) and see if there are splints in those ambulances. The vehicles themselves have 250 horsepower, they are long and red or black, and they have loud sirens and bright lights, and they can go 100 miles per hour; but what, other than a stretcher, do they have inside them? They may have an oxygen tank. Slip around to one of them sometime and turn the tank on and see if there is any oxygen in it!

What about ambulance personnel? Are they trained? My own survey of ambulances in the state of Kansas shows that less than one-tenth of the ambulance attendants in Kansas have had even a rudimentary first aid training, and those men are mostly war veterans. The attitude has been, "Dump them in and let's get going; we can't waste time tying on splints. We haven't a board in the ambulance, if we have a back injury; and we wouldn't know what to do if an airway was stopped up and obstructed. Just pile 'em in, and get 'em to the hospital!"

The morticians run more than 95 per cent of the Kansas ambulances. In questioning them, I get these answers: "Our personnel is shifting. We do not have long enough time to train them." "Our ambulance calls are money-losers unless we pick up a dead one. It just doesn't pay to make an ordinary ambulance call." "Splints cost money. Who's going to pay for putting those splints in the ambulances?" "No one has complained about the way we take care of the injured. No one has offered to train us."

I have been rather destructive in my approach so far, and it is time to become constructive. What can be done about the 38,000 dead on the highways each year, and what can be done about the 1,250,000 injured?

In Kansas today already 380 are dead on the highways this year, and I will have to revise that because I think there were six more in the last 24 hours. Specifically, the Committee on Trauma is pushing better care and, again, transportation, emergency room care, and definitive care.

Listed below are five suggestions for providing good transportation of the injured.

1. A central dispatching agency for ambulances is advisable. The police, with their two-way radios and through the telephone operator, offer a logical central dispatching agency.

2. We need a concentrated effort to equip ambulances with splints and oxygen. There are certain ambulances in counties in Kansas that are equipped with splints, because interested physicians have placed them there. The morticians, I find when I contact them, are perfectly willing to have splints placed in the ambulances as long as they don't have to pay for them. Local civic groups in most areas are always looking for some project that is worth while for them to aid, and certainly equipping ambulances in these towns would be a good endeavor. We can get splints in the ambulances.

3. Ambulances should be manned by two attendants; one man cannot handle four, five, or six injured individuals, and he certainly can't carry a fat lady down from second floor, even with the aid of the family, as satisfactorily as would be possible if he had a trained attendant with him.

4. We need training of ambulance attendants. The local Red Cross first aid instructors are always willing to help, and in many cities the help of local police and firemen can be obtained. All they need is a spark; they need a drive to push that spark on, and they are happy to be of assistance.

5. Lastly, we need voluntary adherence to a code for those running ambulances, incorporating the above. In places such as Flint, Michigan, and other cities, they have by ordinance required their ambulances to carry splints and to have trained attendants. In many cities like Chicago, where they have an ordinance, it is like prohibition; it just is hard to legislate these things into existence and active use. Voluntary adherence is the way that it should be done, but if it can't be done that way, certainly local city ordinances can be worked out.

Now to the second objective of our Kansas Committee on Trauma—emergency room care. There are several points that I briefly want to go over: first, seeing that hospital staffs know that their emergency rooms are available, are equipped, and used. You would be surprised how emergency rooms deteriorate. The College of Surgeons, through its accrediting of hospitals, has made a point of stressing emergency room set-ups in the various institutions, and it is a part of the surveys that are being made today for accrediting of hospitals.

Second, we need more training in the care of trauma in medical schools. I think (and all of you, I believe, would bear me out) that most of the young men coming out of medical school are eager to know more about what to do with trauma. If they are going to learn by trial and error, certainly that is unfair not only to those individuals (the students), but it is also unfair to the patient.

Third, where interns are available in hospitals, the hospital staff has to take the responsibility of teaching them the care of trauma. I have, personally, known of patients coming out of our largest hospitals in Kansas being transported to another hospital with fractures that were not splinted by the interns in charge of the emergency rooms of those hospitals. There is no excuse for that.

The fourth point is postgraduate and circuit courses in the care of trauma. I feel that all of us are a little inclined to pass off some of the primary lessons in handling trauma; but I believe that they can be repeated again and again and do all of us a considerable amount of good, including removal of our mental cobwebs. As the first aid and emergency room care of trauma goes, right there the entire course of the case is determined.

It might be interesting, if you would go to the emergency room of your hospital and follow a case of injury from the time the patient gets to the door, to see if transportation of that injured person within the hospital is carried out properly. How is the patient moved to the x-ray table? How is he moved to the operating table? How is he transported between bed and table and examining areas? It is rather surprising, sometimes, to see how attendants bundle the patients up and how they handle them.

As for definitive care in the hospital, again, postgraduate instruction is a prime objective. We need more papers on trauma at our Kansas Medical Society meetings, and we of the Kansas Committee on Trauma of the College of Surgeons certainly appreciate the opportunity of bringing this program here today.

I hope that in being rather blunt I have not offended; but if offense has been done, measure it carefully. Ask yourself honestly, "If I am injured in my own city, am I going to be satisfied with the way I am transported to the hospital?" If you can answer that question honestly, and believe that you will be, then we have reached the objective for which we are striving.

Axtell Clinic
Newton, Kansas

Emergency Room Care

What Facilities Should Be Available without the Delay of a Long Search? Do You Have Them?

THOMAS P. BUTCHER, M.D., *Emporia*

When I was asked to discuss this subject I thought, "This emergency room business is a kind of stepchild of surgery. The emergency room itself is a kind of stepchild of the operating room. It gathers a lot of dust from day to day, and even when it gets business it doesn't always get cleaned out very well. I will not attempt to run through any kind of a general survey of an emergency room; rather I'll take the lead that has been given us and ask you some questions, and I hope again that you will try to answer these for yourselves. Perhaps in one or two instances, for a few of you, this may strike home.

A story is always a good way to get attention, and medicine, of all places, lets you tell more stories than most fields—well, the lawyers have it on us. They, I think, do a little better at that than we do. Let me begin with some case histories, not in any great detail but because they point up certain things so we

can briefly catch the highlights. These are based on fact. Most of them did not take place here, fortunately.

One is that of a 72-year-old riding academy attendant who was kicked in the throat while cleaning out the stables. He was seen by the doctor on the ambulance within perhaps 45 minutes of the time of injury and was taken to a hospital. On the way in to the hospital it was evident that he had received a rather severe contusion of the throat, probably of the larynx. Upon arrival at the emergency room of the hospital, the doctor who had made the ambulance call said to the people in the emergency room, "Get a tracheotomy set ready because this fellow may get enough edema to shut off his wind. And tell the folks on the floor where he is admitted to be sure to have a tracheotomy set ready."

Within 24 hours the man was dead of laryngeal edema because, when it became apparent to the doctor taking care of that particular service that the man was obstructing, the tracheotomy set was not available and nobody knew where it was, and nobody had enough initiative to cut off the end of a fountain pen cap and shove it in there.

Do you know, individually, where you can put your hand on a tracheotomy set in five minutes in your hospital, any one of you? Just ask that of yourselves. Does your house supervisor know where the tracheotomy set is?

I tried this on our home institution and dropped down at lunch yesterday and talked to this very lovely young lady and said, "What about the tracheotomy set?"

"Oh, we've got it. It's right there in central supply."

"That's wonderful. I'm glad to know it. I didn't know where it was and now I do, and I don't want to get caught not knowing again."

About three o'clock in the afternoon the telephone rang and she said, "This is Miss Blank. I'm awfully sorry. We thought that tracheotomy set was down in central supply. We found out it's in a closet upstairs just off the nose and throat section."

"Well," I said. "I'm glad to know that. Are you sure it's there?"

"Yes," she said, "we've seen it."

"Fine," I said. "We'll put that down then as the place the tracheotomy set is kept. It doesn't matter where it's kept. It's just a matter of knowing where it is."

The second case was a young man 24 years of age with first and second degree burns received from a flash flame while he was working with some gasoline in the garage. He was taken to the hospital with 20 per cent burns estimated. He was anesthetized and his burns were debrided. Within three hours the man was dead. Why did he die?

At autopsy it was found that he had beans, meat fibers, and corn filling his tracheobronchial tree. He had been taken to the hospital and he'd had a gas machine mask slapped on his face in order to have his second degree burns cleaned up. He vomited because he had just eaten. He suffocated from the vomitus that he sucked back into his lungs because the anesthetist was going to do her job well. Struggle or not, she was going to see to it that he got that anesthetic.

How many of you can put your hand on a suction machine within five minutes after you walk into the door of your hospital—one that works, not just one that's been sitting there for a couple of years and never been tried out in that time? I think it's pretty generally agreed now, and the anesthetists have impressed this upon us here in Emporia where we have what we believe is high grade anesthesia, that we just don't put people like that to sleep any more.

I can remember when we'd keep an ethyl chloride tube in the top drawer of the desk in the office. Some little kid would come in with a cut, and you'd "whiff" him with ethyl chloride and sew up his cut. I don't think we've given a general anesthetic under those conditions, at least I don't know of any having been given, for a long time now. Local anesthesia, if anything is necessary, works very nicely. Certainly for the person who has not had time for gastrointestinal preparation, a general anesthetic or the pentothal anesthesia is a real hazard and one not to be treated lightly.

One more story—that of a man who, many years ago, sustained compound comminuted fractures of the left lower leg and foot. He had avulsion of a large portion of the skin of the sole of the foot and at various other points along the leg and thigh, with very deep lacerations of the thigh.

He was hospitalized, primary closure was done, and he went along for a couple of days with doubtful circulation, no dorsalis pedis pulse on that side. It was felt that if amputation became necessary, spontaneous demarcation would help decide the level. On the third post-injury day he developed fever of 102 or 103, his pulse went to 160, his blood pressure went to 200/120, and he became highly toxic.

On his admission he had had tetanus and gas antitoxin prophylactically. Massive doses, several million units a day, of gas antitoxin were started, and amputation was performed on the fifth day following injury. Convalescence was stormy, but he recovered. The point is obvious. We don't do primary closures on things of that sort. And we do perform debridement of devitalized tissues.

How many of you can walk into your hospital and put your hand on a stomach pump, and on British anti-lewisite (B.A.L.), if that's indicated in poisoning? How many of you can find a wall chart that will give the antidotes for the various types of poisoning and a book listing the common drugs that are available and their chemical constituents and antidotes when they are toxic?

A young man, a Marine, was riding as a passenger in a car of a young Negro who had picked him up in San Francisco. They arrived near Peabody. The Marine was driving the car, he went to sleep, and the car hit a culvert. As is so often the case, he sustained typical compression fracture of the chest with paradoxical respiration. He was about gone with inability to ventilate. This doesn't require any special equipment except that you need a nice big wood screw to put into the sternum and to which you can hang 10 to 20 pounds of weight to pull it forward. That was all that was necessary to give this man a chance to breathe comfortably.

How many units of plasma, or better still perhaps since plasma has come into some disrepute, plasma-like substitutes (dextran or gelatine) are available in your hospital in the event of a catastrophe? There happen to be 19 in one of our hospitals. That would help us along for a while. It probably isn't enough. How many do you have at hand, ready to go, in the event that an airplane crashes into a theater or a stadium collapses? You can get almost any amount flown down to you in an hour or so from supply depots in Kansas City.

It is better to think these things through now so that when the time comes for action, we may act well.

Emporia Gazette Building
Emporia, Kansas

Abdominal Injury

Basic Principles of Management of Various Types of Abdominal Trauma

RICHARD E. SPEIRS, M.D., ***Dodge City***

Injuries to the abdomen have many causes. These include stab wounds, gunshot wounds, falls, and automobile accidents. In the latter the possibility of intra-abdominal injury must always be considered. Frequently stab wounds and gunshot wounds show definite intra-abdominal injury that requires immediate care. These offer no particular diagnostic problem.

Not infrequently penetrating wounds appear to be superficial, and the responsibility for determining the depth of these injuries falls squarely upon the physician. Probing of such wounds is inaccurate as changing positions shift the muscles and fascia, closing the hole. The most difficult cases are those seen following automobile accidents or farm injuries where there has been a blow to the abdomen without evidence of penetration or contusion to the abdominal wall.

The association of abdominal trauma with fractures frequently results in neglect of the abdomen because of preoccupation with more obvious injuries. The counterpart of this is the extra-abdominal condition which produces physical signs simulating those in actual abdominal injuries. Examples are fractures of the spine, pelvis, and ribs, ruptured kidneys and diaphragm, retroperitoneal hematoma, or hematoma of the abdominal wall. In these conditions it is mandatory that the presence of abdominal injury be ruled out.

Because of these contradictory and complicated findings it behooves us, when first seeing the patient, to examine him carefully from head to toe. This is best done by setting up a routine for the examination. It will require but a few minutes and should be completed before emergency or definitive treatment is started. By establishing a definite routine a physician is not likely to care for obvious injuries and neglect those that are not immediately perceptible. The unconscious patient further complicates the diagnosis.

Signs of abdominal injury may be slow in developing. It is frequently necessary to sit by the side of the patient and examine him continuously—looking for any change in his condition—before it is possible to say that this person does or does not have an internal injury. The rapidity of development of signs will depend largely upon the extent of abdominal injury. The severely injured and shocked patient may not react normally to the spillage of bowel contents into the abdominal cavity, and rigidity from a torn bowel may not be immediately discernible.

For general purposes the contents of the abdominal cavity can be divided into (1) solid organs such as the liver, spleen, and kidney; (2) hollow organs such as the stomach, intestine, and bladder, and (3) the supporting structures such as the mesentery of the large and small bowel and the blood vessels contained therein.

The principal danger in injury to the solid organs and the supporting structure is from hemorrhage. The spleen is notorious for the deceptive manner in which it bleeds. Normally it is a soft, friable organ. Its vessels do not retract as do those in a muscle. After spontaneous cessation of the hemorrhage, increasing blood pressure may blow out the soft clot with a resultant secondary hemorrhage. For this reason hemorrhage from a ruptured spleen is sometimes delayed for one or two days, and it is not uncommon for a secondary hemorrhage to occur between the seventh and 14th day post-trauma.

The liver will act in a somewhat similar manner although the hemorrhage is usually obvious at an earlier period than with the spleen. It must be remembered that blood going into the peritoneal cavity is physiological and does not necessarily cause severe peritoneal reaction as do contents from the intestinal tract.

Peritoneal manifestations resulting from rupture of a hollow viscus depend upon the contents of the organ at the time of rupture. The stomach that is distended is much more likely to burst with a blow than is the empty one. The contents of a full stomach will cover the peritoneal cavity much more rapidly than the contents of one that is partially empty, giving rise to more immediate and more severe manifestations.

The chemical constituents of the stomach and upper intestinal tract are more irritating than pathogenic organisms and give rise to an immediate reaction. In the colon the liquid portion of the intestinal content is greatly decreased, and spread of that spillage is less violent than spread from the proximal bowel. Signs of a ruptured colon are somewhat dependent upon the infection that results, which partially accounts for delay and difficulty in diagnosis.

The occurrence of some visceral injury remote from the site of the force can be accounted for by the attachment of the mesentery or adhesive bands which do not give with the application of force.

In the examination of injured patients one must look for rigidity of the abdominal wall, although a patient who is unconscious or in shock may lose this valuable sign. A patient with a fractured rib or chest injury will have rigidity of the abdominal wall, but this rigidity is usually unilateral and there is a relaxation with respiration.

Intestinal peristalsis frequently indicates whether or not intra-abdominal injury is present. Generally speaking, peristalsis is decreased by reflex inhibition with the discharge of either blood or intestinal content into the peritoneal cavity. Occasionally, early after an injury, there is markedly active peristalsis of the intestine as a result of irritation of the peritoneum. Peristalsis can be diminished as a result of edema from contusion of the intestine without actual rupture.

Fracture of the thoracic spine can closely simulate intra-abdominal injuries. This is principally due to the fact that the abdominal parietes receive their innervation from the lower six thoracic nerves, which supply the abdominal wall. Injuries to these nerves may produce referred sensory pain, tenderness, hyperesthesia, and spasm to the involved segments. However, there is usually tenderness and deformity over the spine at the site of injury, and this is not seen in true abdominal injuries. It is important in all cases to examine the spine carefully for evidence of a fracture.

Traumatic rupture of a kidney will show localized tenderness over this kidney, and frequently a definite asymmetry can be seen in the flank as a result of accumulating blood. In most ruptured kidneys the urine will be bloody, but this is not necessarily so. If the ureter is torn and the distal portion retracts so that blood cannot gain entrance into the urinary bladder, there will not be blood in the urine. Rupture of the bladder secondary to over-distention, or from a fragment of the pelvic bone, can also produce bloody urine.

X-ray examination is of great aid in the diagnosis of trauma. It will reveal fractures of the ribs or the spine, free air in the peritoneal cavity, or separation of the loops of the intestine signifying that some abnormal fluid is present in the peritoneal cavity.

A fracture of the lower ribs denotes that a severe impact has occurred, suggesting the possibility of a ruptured liver or spleen. A ruptured spleen will give an increased area of density in the left subdiaphragmatic space. It is also reported as causing a notching effect upon the left border of the gastric shadow. Occasionally the left diaphragm is elevated, and atelectatic areas in the left lower lung field or contused areas from the original impact are visible.

The diagnosis of abdominal trauma can be difficult. Skill, patience, and clinical judgment will be severely taxed in the doubtful case. Even with all facilities available, one cannot always make a definite diagnosis. In such cases abdominal exploration may be wiser than procrastination.

First National Bank Building
Dodge City, Kansas

Lower Extremity Fractures

Simple but Effective Splinting Is the Key to Safe Transportation and the Avoidance of Complications

CHARLES K. WIER, M.D., ***Wichita***

Emergency treatment of fracture in the lower extremities begins where the patient is first seen. This emergency should provide the following:

1. Morphine or Demerol for relief of pain (if medically qualified personnel is present).

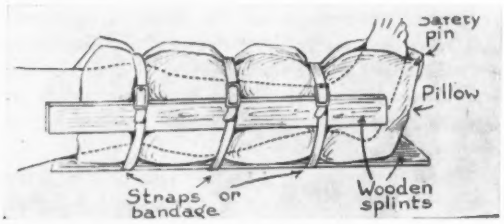

Figure 1. Pillow splint. Good for any fracture from ankle to knee. Practically no danger of circulatory disturbance results from its use. (From Key and Conwell *Fractures, Dislocations and Sprains,* the C. V. Mosby Company, St. Louis.

2. Supplying of adequate immobilization by any one of the methods illustrated (Figures 1 and 2). Splints correctly applied:

A. Further reduce pain.

B. Prevent additional soft tissue damage.

C. Prevent added shock.

3. Compound wounds should be covered with the cleanest material available to prevent more contamination.

4. Control of bleeding by means of pressure dressing (a tourniquet is rarely necessary).

5. Not until these steps have been accomplished should the patient be moved for immediate conveyance to a hospital. Upon arrival there treatment for present or impending shock should be started immediately.

Shock invariably follows major fracture of the long bones caused by great violence. It is made manifest by a rapid pulse, thirst, profuse sweating, anxiety, and, lastly, by a falling blood pressure. In fractures in which there is much deformity and much swelling, there is considerable "concealed bleeding." Shock can be forestalled if treated early. Symptoms may be due to loss of blood or to a decrease in blood volume caused by extravasation into the soft tissues.

Intravenous fluids are to be given in the following order of preference: (Whichever is used, it should be run in rapidly through a wide open 19 gauge needle if the blood pressure is falling. When the pressure is raised to normal, the rate of flow is decreased.)

1. Whole blood (start dextrin or one of the electrolytes while the patient is being typed and cross matched).

2. Serum albumin.

3. Dextrin.

4. Plasma (if urgently needed and 1, 2, or 3 blood is not immediately available).

5. Saline and glucose solutions will raise the patient's blood volume temporarily, but they will not maintain it indefinitely. However, their use may save a life while 1, 2, or 3 blood is being obtained.

6. Oxygen is given as indicated.

In early shock, the patient's response to treatment is usually quick and gratifying; in the case of profound shock of long duration, the condition may be "irreversible" and may not respond to treatment. However, with modern therapy irreversible shock is rarely seen.

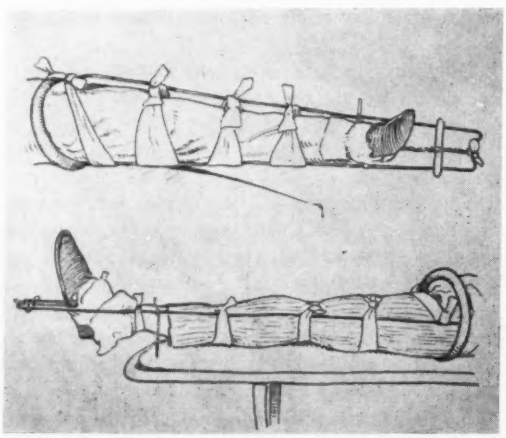

Figure 2. Thomas splint applied for emergency. Top —anteroposterior view. Bottom—lateral view. Distal end of splint is held off stretcher by metal support, box, or pillow. End of splint may be hung from roof of car or ambulance. (From Bancroft and Murray *Motor Skeletal System,* J. B. Lippincott Company.)

Traction is one of the oldest and most effective ways of immobilization for correcting deformity, and occasionally for reducing the fracture.

Skeletal traction is more effective and more comfortable than adhesive traction and can be initiated with a local anesthesia. Given a patient with multiple fractures of the lower extremity, under local anesthesia, without moving the patient, insert a one-eighth inch Steinmann pin through the os calcis and attach an "ox bow" to the ends of the pin. The leg is then gently lifted into a Thomas splint, and weights are attached to the ox bow. This routine may be considered definitive treatment, but it is also good emergency treatment and is applicable to any leg fracture from the ankle to the hip (Figures 3 and 4).

In dislocation and fracture dislocation of the hip, there is no sharp line of demarcation between emergency and definitive treatment. Pain is usually intense, and the only relief is to obtain reduction as soon as the patient's condition will permit. If a closed reduction should not be possible, then an open reduction should not be delayed too long, especially if there are vascular or neurological complications discernible, such as a cold foot, loss of extension of toes, and anesthesia of the foot and leg.

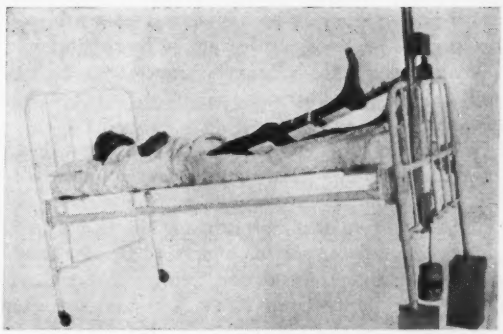

Figure 4. Lower extremity in a Thomas splint with traction applied through pin in os calcis. Ring of Thomas splint is suspended to overhead frame, omitted for clarity. Method affords immobilization of fractures and correction of deformity. A good "overnight" method of treating one or multiple fractures until definitive methods have been decided upon. (From Key and Conwell *Fractures, Dislocations and Sprains,* the C. V. Mosby Company.

Figure 3. Details of traction with Kirschner wire or Steinmann pin through os calcis. There is no stretch on the skin. (From Key and Conwell *Fractures, Dislocations and Sprains,* the C. V. Mosby Company.)

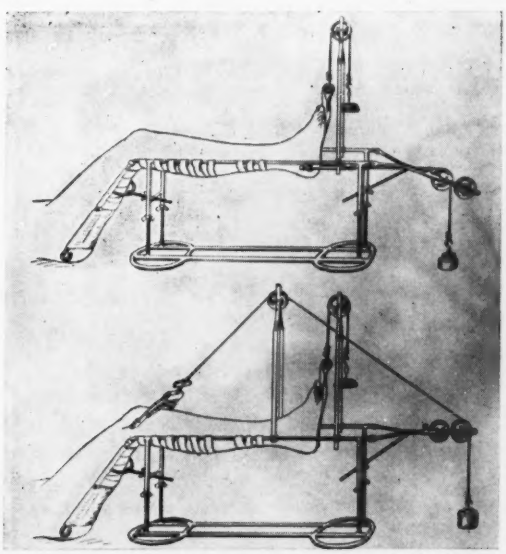

Figure 5. Zimmer modification of Boehler-Braun splint, padding omitted to show detail. Top—for use in lower leg fractures with pin through os calcis. Bottom—for use in fractures of femur. Pin can be inserted through condyles of femur or through upper tibial crest. These are handy splints to have in any hospital and simplify obtaining x-rays by portable machine. (Courtesy Zimmer Manufacturing Company, Warsaw, Indiana.)

Pelvic fractures may be complicated by a ruptured bladder, almost always made manifest by a rigid lower abdomen, or by bloody urine on catheterization. It is well to leave the catheter in position if gross blood is obtained.

Injuries of the spine, abdominal area, chest, head or neck should be looked for and treated without delay. These injuries may require more immediate definitive treatment than the extremity itself.

Emergency treatment for compound fractures must also include the process of converting a contaminated wound to a clean wound. It has been our experience that compound fracture wounds are best cleansed by using the method of Henry who advises a "shower bath" for the wound rather than a tub bath. After all the skin surrounding the area of the wound has been adequately cleansed with soap and water, while the wound is protected from further contamination, then the wound itself is copiously irrigated with either a saline solution spray or a spray of soap and distilled water. The object of this routine is, in the main, to remove gross contamination.

While the wound is being irrigated, threads of devitalized tissue float up into the wound and can be removed with a sharp knife. Other obviously devitalized muscle is excised. Gown, gloves, and instruments are changed, drapes are applied, and the wound is further explored and enlarged if necessary so that adequate exposure can be obtained.

Foreign matter, if ground into the fragment ends, is removed with a rongeur. Loose bone fragments are removed. The result should be a clean appearing, well vascularized wound.

Whether the wound is left open or closed depends on the time lapse since the injury was sustained, the degree of contamination, the judgment of the doctor, and the condition of the patient. All vital skin on the lower leg should be saved, as in this area there is very little relaxed skin. If the wound is closed, it should be with the skin and subcutaneous tissue only, with no tension. Relaxing incisions may be necessary. It is not advisable to close wounds which are more than four hours old. Internal fixation in compound wounds is not recommended. After the wound has been treated, immobilization is obtained as in a closed fracture.

SUMMARY

Fractures of the lower extremity may be followed by shock. For adequate treatment, morphine may be given for pain. After the fracture has been splinted, the patient may be moved to a hospital where shock may be treated through the use of whole blood, serum albumin, or dextrin. Not until the patient's general condition will justify it, is definitive treatment to be started. During the emergency period the patient should not be put through painful movement just for an x-ray when there is an obvious fracture.

425 North Hillside
Wichita, Kansas

Burns

The Care of Severely Burned Patients Must Be Maintained At an Emergency Pitch for the Duration of Treatment

A. E. HIEBERT, M.D., *Wichita*

No surgical emergency requires more deliberate medical acumen than the complete management and care of the patient with an acute severe burn. Paradoxically, under the pressure of circumstance, there is little time to deliberate. It behooves us therefore to be prepared in advance with definite patterns of conduct, which should not be static but constantly open to modification and improvement.

No claim to originality is made for this paper. It is rather an attempt at compilation of some of the more recent accepted practices in the treatment of burns. These are presented in a more or less didactic form, in the hope of starting an immediate integrated regimen. The policies of the first few hours may have much to do with the life or death of the patient.[1] Much of this may seem trite, but it is still important to go through with the "fire drill."

THE ACUTE EMERGENCY

This may happen to any of us. The excited hospital emergency nurse calls and says, "Doctor, four severely burned patients have just arrived. Will you take over at once?" You have 10 or 15 minutes to think while you madly rush to the hospital. What must you do? You must collect yourself now, for once you arrive there will be the turmoil of frantic relatives, in-

quiring police officers, tense bustling hospital personnel, and four very sick patients, all seeking your undivided attention. While you are still taking a mental inventory, you arrive at the hospital. You dash by understanding officers, give a reassuring nod to the relatives, and then see the patients. Suddenly you must draw on every resource that medicine has to offer.

IMMEDIATE EMERGENCY CARE

1. Make a quick survey and determine the relative priority of patients and of procedure. (Children with more than 8 per cent and adults with more than 15 per cent of body surface burned are considered serious).

2. Give a narcotic for pain. The injection is made intravenously to give prompt relief and to avoid dangers of secondary cumulative effect. Use the normal dosage. In the aged use light dosage to obviate unnecessary depression. Remember that deep burns are less painful than superficial ones.

3. Cover the patient with clean sheets. Avoid blankets and quilts as these are usually contaminated.

4. Treat existing or impending shock. All burn patients suffer shock in varying degrees, which becomes manifest in 30 to 45 minutes after the onset of the burn. If practical, assign a house officer to each of the patients, or secure the help of medical colleagues so that therapy may be simultaneous.

A. Start an intravenous drip of normal saline solution or Ringer's solution.[7] If shock is present or the cubital veins are not available because of burns, cut down on the great saphenous vein just anterior to the medial malleolus. A size 19 needle, or better still a size 18 polyethylene tube, may be inserted and ligated in place. (This latter tube should be ready in advance in the emergency room. It should be about 15 or 20 centimeters long and have fixed to one end a suitable adaptor for the intravenous apparatus.

B. While getting into the vein, draw blood for matching, and start a transfusion as soon as possible. Plasma may be used at once if it is known to be safe.

If shock continues to increase, speed up fluids, especially the electrolyte. Guard against hyperhydremia, especially in the aged.

5. Insert an indwelling catheter for hourly measurement of urinary output. (The hourly output should be between 25 and 60 cc. To regulate this, fluids are either increased or decreased).

6. If oxygenation is poor, make sure there is no mechanical obstruction to respiration and use aspiration if necessary. If the color of the patient is poor, because of impaired circulation, give intranasal oxygen. (Insert an intranasal catheter as deep as the distance from the nose to the ear, and give from 4 to 6 liters of oxygen per minute).

7. If there are aspiration burns, a tracheostomy may be done so as to be better able to aspirate secretions.

8. Give 1500 units of antitetanic serum, or, if the patient has had active immunization, a booster dose of toxoid, while the patient is still in the emergency room. (Tetanus has later developed in some cases where this was taken for granted but had been neglected.)

9. Antibiotics need not be given, except for specific indications.

10. Local Care: While all these other attentions are given, local treatment should not be neglected. The immediate concern should be for making the patient comfortable. Aseptic technique is used, personnel wearing masks and gloves. The patient's tight clothing is loosened and irritating substances removed. Before starting definitive treatment, examine the patient for other injuries, such as fractures, hemorrhage from open wounds, or other obvious disease.

Definitive treatment: For most burns, especially the extensive ones, we prefer the exposure treatment. Smaller areas, which permit ambulation, may be dressed with bland coverings. If a tight occlusive dressing is applied to an extremity, care should be exercised not to cause a tourniquet action proximally, which may cause edema and later fibrosis distally.

SECONDARY EMERGENCY CARE

Once the patient is safely in bed, the doctor may catch his breath and pause to reflect on the separate problems of each individual patient. General policies are set forth in the following. Individual variations can be made to suit each particular case.

1. Make a diagrammatic body surface chart, showing the extent and degree of burns. Estimate the per cent of burned body surface according to Berkow's method, or the "Rule of Nine."

Rule of Nine:	*(For Adults)*	*(Children 0-2 Yrs.)*
Head and Neck	9%	18%
Upper Extremity	9%	
Lower Extremity	18%	11%
Front of Trunk	18%	
Back of Trunk	18%	
Genitalia	1%	

2. Secure from the history or estimate the weight of the patient in kilograms.

3. Estimate the average colloid and electrolyte fluid requirement of the patient by the use of Evans' formula,[6] as follows.

Percentage body burn times weight of the patient in kilograms is one burn unit. This represents the number of cubic centimeters of colloid requirements the first 24 hours after the onset of the burn. For the second 24 hours, one-half of this quantity is given. An equal quantity of normal saline or Ringer's solution is given.

During the *first 24 hours,* starting with the onset of the burn, give one-half of the calculated colloid and electrolyte the first eight hours and the balance during the remaining 16 hours. (Not more than 4000 cc. colloid nor more than 8000 cc. electrolyte should be given in the first 24 hours.[1]

During the *second 24 hours,* one-half of the above quantity of fluids is given.

After the first 48 hours, when diuresis begins and edema subsides, electrolytes are sharply curtailed.

4. Oral Intake: Additional fluid requirements for metabolism are given orally as tolerated. (In the presence of gastric stasis, the contents may be periodically aspirated till enteric tone is re-established). Buffered hypotonic saline solution is recommended by Moyer.[7] This consists of one teaspoon of salt and one teaspoon of sodium bicarbonate per quart of iced drinking water. Bartlett[1] suggests an average daily requirement as follows:

Children, 0 to 2 years	*Children over 2 yrs.*	*Adults*
160 cc. per kg. body weight	1500 cc.	2000 cc.

(Guard against over hydration in children and the aged.)

5. Chart Intake and Output. (Sample Chart):

	Intake		Output	
Time	*Parenteral Fluids*	*Oral Fluids*	*Urine*	*Emesis or Suction*
.....				
.....				
.....				
..... (Routine Nurses' Recordings)				
.....				
.....				
.....				
8-Hour Totals	.....	.....	.....	.....
24-Hour Totals	.....	.....	.....	.....

6. Be explicit in nurses' orders, e.g. give

A. Blood transfusions 1000 cc. from 12:00 noon to 8:00 p.m.

B. Blood transfusions 1000 cc. from 8:00 p.m. to 12:00 noon (next day).

C. Normal saline 1000 cc. 12:00 noon to 8:00 p.m.

D. Normal saline 1000 cc. 8:00 p.m. to 12:00 noon (next day).

E. Oral fluids up to 2000 cc. in 24 hours ad lib. Prepare as follows: 1 teaspoon salt, 1 teaspoon sodium bicarbonate, 1000 cc. iced drinking water.

F. If patient tends to vomit, aspirate stomach through nasal tube.

G. If urinary output drops below 25 cc. or above 60 cc. per hour, notify doctor.

GENERAL CONSIDERATIONS

During the following three or four days, when diuresis takes place and the tissue fluids tend to stabilize, blood examinations become more reliable.

1. Blood sodium and chloride determinations should be made, as the tubules of the kidneys do not always select well at first.

2. Blood counts and hemoglobin determinations should be made frequently, as there is a loss of erythrocytes and a decreased bone marrow activity. Severe anemia may result the first week. Prophylactic daily 500 cc. blood transfusions may be indicated.

3. Diet: This poses an important problem. The nutritional requirement of severly burned patients is tremendous,[4] yet there may be little tolerance on the part of the patient. With an estimated loss of blood protein of about 2 grams per one per cent of body surface burned,[1] and with added requirements for healing, the nutritional demand increases. Burnett[3] has suggested that 1000 calories be added to the average daily requirement. Lund[8] proposes the following schedule:

The food intake can be boosted by gavage through a small retention polyethylene catheter inserted into the stomach by way of the nose. This can be maintained for weeks on end without apparent irritation. Various preparations with high protein, high caloric content can be secured on the drug market. These may be used to supplement the regular diet.

The care of severely burned patients must be kept at an emergency pitch until the burns are healed. Unless constant vigil is kept, the patient may gradually and almost imperceptibly lapse into a depletion status, which is hard to overcome. The object of all treatment must be to cover the denuded surfaces as soon as possible. As long as there are raw surfaces, there is loss of tissue fluids and danger of infection. Under these conditions, it is difficult to maintain nitrogen, electrolyte, and general nutritional balance, unless this is constantly watched.

LOCAL DEFINITIVE CARE

If occlusive dressings have been used originally, these should be changed to keep the wound reasonably clean. If the exposure method is used, care

MINIMAL FOOD NEEDED DAILY BY PATIENTS WITH THIRD DEGREE BURNS, ACCORDING TO THE TOTAL AREA UNHEALED

Burn Area Per Cent	*Protein Grams*	*Calories*	*Ascorbutic Acid Grams*	*Thiamine Mgs.*	*Riboflavin Gms.*	*Nicotinamide Gms.*
20 plus	300-400	5000	2.0	50	50	500
10-19	200	3500	1.0	25	25	200
5-9	125	3000	0.5	15	15	100
1-4	90	2500	0.5	10	10	50

should be taken to avoid accumulations of pus under the eschar. (Pyocyaneous bacteria thrive on a dirty wound.) We have largely preferred exposure treatment,[10] even when the burn is circumferential. Sticking of wounds to the bed clothes is prevented by the liberal use of powdered aluminum sprinkled on the bedding and patient.[9] A Stryker bed helps in the nursing problem.

As soon as possible, skin grafting should proceed. Sharp debridement will hasten sloughing. As soon as areas of clean granulations appear, and the general condition of the patient permits, autogenous grafts should be applied. If large areas are involved, the patient's life may be saved by use of homografts from live donors or from the skin bank.[2] Once the skin covering has begun, the patient's condition improves increasingly. Raw surfaces on hands or about joints should receive priority, to avoid deep fibrosis, contractions, and fixations. Burns about hands, when not too extensive, can be debrided initially and grafted at once.[5] This is especially applicable to mangle burns, which are always deep.

Grafting about the orbits should be done early to avoid ectropion and corneal damage.

SUMMARY

An attempt has been made to outline some general principles in the treatment of burns. These may be varied with conditions. There should be no letdown in the care and attention from the excitement of the first few days until the burn is healed. This problem is greater than any one specialty in medicine.

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There is nothing funny about accidents. But there is a grim humor implicit in the foolish, immature lapses of otherwise sensible men and women, which are by far the greatest single cause of our highway horror. . . . Every one of us is capable of error. We are all subject to fallacies in thought and deed. Our message to you as a driver or a pedestrian is that all too often these fallacies can be fatal.

The Travelers 1956 Book of Street and Highway Accident Data

Head Injuries

Most Patients Can and Should Be Treated in the Locality Where Injured. There Are Few Indications for Surgical Intervention

WILLIAM P. WILLIAMSON, M.D., ***Kansas City***

The management of intracranial injuries is a task which can, should, and must be handled by the general surgeon or general practitioner with few exceptions. Transporting the patient to a distant neurosurgeon may entail great risk to life, and in the majority of cases, competent management of the situation by the local physician will save more lives than will transfer of the patient to a distant specialist.

The indications for actual surgery in intracranial injuries are relatively few and usually readily recognized. They are only three in number:

1. *Depressed skull fracture.* This type of fracture is usually compound, since a blow severe enough to produce localized depression of bone also causes a laceration of the scalp directly over the area of depression. The diagnosis is made readily by inspection and palpation. Insertion of the gloved finger into a scalp laceration should be an absolute "must" before suture of any scalp laceration. A depressed skull fracture can be diagnosed routinely in this way and demands definitive surgery immediately, mainly to prevent the complication of meningitis, cerebritis, or brain abscess.

The repair of compound depressed skull fracture demands simply the general surgical principles of thorough debridement of the wound, including the brain, and water-tight closure of the dura, replacement of bone fragments in their relatively normal position, and closure of the scalp in layers, without tension and without drainage. To drain such a wound is to admit improper debridement and only allows an avenue for the entrance of infection. Depressed fractures over the sagittal sinus, torcula, or sigmoid sinus should be referred to the specialist because of profuse bleeding that occurs upon their elevation. Depressed fractures into the nasal air sinuses demand removal of sinus membrane and careful watertight dural closure.

2. *Extradural or middle meningeal hemorrhage.* This is the syndrome of head injury with unconsciousness, followed by lucid interval of consciousness, with subsequent development in a matter of 4 to 24 hours of headache, vomiting, stupor, coma, ipsilateral dilated fixed pupil, contralateral hemiplegia, and then death. It must be remembered that if the initial blow or concussion is severe enough to produce unconsciousness for several hours, the lucid interval will not be present. Equally important is the fact that the initial contusion or laceration of the brain may produce any neurological condition, including a dilated pupil or hemiplegia; it is only when these signs progressively develop several hours after the injury that one can assume extradural hemorrhage to be present.

For this lesion immediate surgery is indicated, consisting of temporal craniotomy, removal of blood clot, and control of hemorrhage. This is handled best by the neurosurgeon, but time rarely will allow long distance transportation, and life will depend upon immediate local surgery.

3. *Subdural hematoma.* This lesion is rarely present during the acute stage of the head injury and usually causes progressive headaches and visual disturbances weeks or months after injury. These patients usually develop papilledema and localizing signs, and the lesion is verified by arteriography, ventriculography, or trephination of the skull. Simple drainage is curative.

Any head injury not presenting the above surgical indications must receive medical management, which is directed at supportive measures assisting body defenses against brain injury. Certainly we cannot alter the presence of the damage that already has been done. The general care of the patient is, however, exceedingly important and often determines whether the outcome shall be life or death. The following features are worthy of note:

1. *Position in bed and airway.* With the head elevated, intracranial pressure is lowered, venous drainage of the brain is improved, and cerebral edema is lessened. The head of the bed should be elevated unless the depth of coma is so great that cough reflexes are abolished. In this case, the patient will drown from his own tracheobronchial secretions, which always are excessive in serious intracranial injury. Thus in unconscious patients it is essential that the head of the bed be flat, that the oropharynx and trachea frequently be cleared of secretions, and that the patient be kept on his side with frequent turning to allow postural drainage. Endotracheal suction can be carried out by inserting a catheter through the nose into the trachea. It can be left in place and intermittently

aspirated. If the physician is not certain that the airway is adequate, then tracheostomy is indicated and has saved many lives.

2. *Oxygen.* This should be administered by nasal catheter, or preferably by tent, to all unconscious head injury patients for at least the critical period of two or three days.

3. *Fluids.* Intake should be maintained initially to the average daily amount of 2000 cc., which may be given by vein or subcutaneously. Intensive dehydration no longer is in vogue. Fifty cubic centimeters of 50 per cent glucose, sucrose, or albumin should be reserved for those patients who, at 12 to 36 hours from injury, show evidence of increasing intracranial pressure due to cerebral edema, with deepening stupor, slowing pulse, and absence of localizing signs. Once started, hypertonic solutions should be continued every six hours until the stage of edema has passed, which usually is about four days. Even while receiving hypertonic solutions the patient must have an adequate fluid intake. Blood or plasma should be administered if shock is present, which is rare in brain injury alone. The presence of shock should alert the physician to the probability of other systemic injury, such as ruptured abdominal viscus.

4. *Nutrition.* For two or three days fluids may be maintained by intravenous therapy alone. If the patient is still unconscious after three days, nasal gastric tube feedings should be instituted with adequate caloric and vitamin intake, as well as fluids.

5. *Sedation.* This must be held to a minimum, as it depresses respiration, deepens stupor, and interferes with evaluation of the patient's condition. Morphine is contraindicated. Small repeated doses of sodium phenobarbital usually suffice. Occasionally, the wild maniacal patient requires paraldehyde. Restraints usually serve only to agitate the patient and increase thrashing and restlessness.

6. *Spinal puncture.* Lumbar puncture serves little purpose in either diagnosis or treatment, and in the presence of increased intracranial pressure actually may be dangerous. It is not advocated as a routine.

7. *Chemotherapy.* Administration of antibiotics plays an important part in prevention of infection and should be routine in compound depressed skull fracture, spinal fluid leak from nose or ear, and in the comatose patient as an aid to prevent pneumonia.

Simple linear skull fracture that is not depressed or compound in itself requires no treatment. Spinal fluid leak from nose or ear usually heals itself and requires only prophylactic chemotherapy. Active effort to cleanse the nose or ear should not be made; a simple loose sterile dressing over the external ear will suffice. Irrigation or plugging the ear with cotton aids intracranial extension of infection.

Children are more likely to survive critical intracranial injury than are adults and should never be called hopeless until dead. They often go through desperate neurological situations such as decerebrate rigidity, hemiplegia, unequal pupils, and stertorous respiration, only to be found clinically well a few hours later. Conversely, in elderly patients the prognosis must be exceedingly guarded, as they will maintain a fair neurological state for several days and then gradually develop a downhill course and die from cerebral softening. Intoxicated patients with head injuries are exceedingly difficult to evaluate and require careful observation.

Patients who, when first seen, have bilateral dilated and fixed pupils almost invariably die from severe brain stem contusion. Patients with mild head injuries may be allowed up as soon as they feel like it. Prolonged bed rest serves only to increase psychosomatic elements of post-concussion syndrome.

X-rays play little part in evaluation or management of head injuries. Linear fracture is of no significance, and the basal fracture is diagnosed by bloody spinal fluid draining from the ear. The depressed skull fracture is diagnosed by palpation, and the patient is then taken to surgery where the fractured elements are visualized directly. Certainly the patient with critical head injury should never be moved or handled solely to get x-rays. In brief, other than the above mentioned supportive measures, the less done for the serious intracranial injury the better.

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Fatal Fallacy: Dry roads and sky clear.
Step on the gas and have no fear.

The Travelers 1956 Book of
Street and Highway Accident Data

Ocular Emergencies

Proper Recognition of the Type and Extent of Injury Is Imperative

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In this day of speed, increasing industrialization, and the use of mechanical devices on the farm and in the home, injuries to the eye are common. In 1935-1936, the United States Public Health Service showed that 51.9 per cent of all uniocular blindness and 20.6 per cent of all bilateral blindness was due to accidents.

Many eye injuries occur in conjunction with other injuries and are seen by men not specializing in this field. The manner of examining and treating the eye at this time is important. In all except a few emergencies, the vision should be obtained in each eye separately, even if you use only a magazine. In addition to being diagnostic, this is important because a person may not know his vision is poor in one eye and will blame the loss on treatment. A history is helpful in deciding treatment.

A good light is essential, a small pencil light, flashlight, or a condensing lens. Because of blepharospasm, examination is much easier after instillation of an anesthetic such as ½ per cent Pontocaine or Dorsacaine, 2 per cent Butyn or 5 per cent cocaine solution. Care should be used in opening the lids so that no pressure is exerted on the eye ball. Some form of magnification such as a loupe, reading glass, or plus 15 lens on the ophthalmoscope may be necessary to see small foreign bodies on the cornea.

Small abrasions of the cornea may require staining. This can be done by using a dye such as 2 per cent fluorescein or 2-5 per cent Mercurochrome solution and washing off the cornea. You should be certain the former is sterile.

The lower fornix can be examined by pulling the lower lid down. To examine the upper fornix, the lashes of the upper lid are grasped, then pressure is exerted high on the upper lid and, with the patient looking down, the lid is extended and turned back on itself. (To release have the patient look up.) This exposes the tarsus and sulcus near the lid margin which is a favorite site for foreign bodies. It is well to have an applicator prepared as the foreign body may move when the lid is released. This inspection and examination is quickly done and may often save an eye.

Two-thirds of chemical injuries are due to contact action, and in these, time is the important factor. Regardless of whether the injury is produced by acid or alkali, the eye should be irrigated with water as soon as possible to dilute the chemical and with enough force to remove particles. This irrigation should be continued for 15 to 30 minutes.

A further search for particles and their removal should be made by the physician, with particular attention to the fornices.

Analgesics should be used sparingly as most inhibit epithelialization and may even injure the corneal epithelium and increase the damage. Antibiotics such as 30 per cent sulfacetimide or 4 per cent Gantrisin can be used four to six times a day.

If there is severe conjunctival damage, the necrotic material should be removed and a mucous membrane graft used after 48 hours.

MECHANICAL INJURIES

Foreign bodies in the conjunctiva may move around. They cause most discomfort when under the upper lid near the margin. They can be wiped off without an anesthetic. To remove a foreign body from the cornea, an anesthetic should always be used. Any foreign body that can be wiped off could also be irrigated off and usually with less damage to the epithelium. Those imbedded in the cornea should be removed with a sharp pointed instrument such as a spud or sterile 22-24 needle on a syringe. A good light and magnification are essential.

The patient should keep both eyes open, fixing a point with the uninjured eye to avoid movement. It is well to touch the eye so he will understand it won't hurt and will be relaxed. Your hand should be steadied on his face and the instrument advanced parallel to the cornea so any movement on his part will not cause you to injure the eye. The foreign body should be then lifted off. If a rust ring is left, this should be removed by gently scraping (remember the cornea is only one mm. thick). This may be more easily visualized by frequently closing the lid over the cornea. If the rust is not easily removed, it can be touched with silver nitrate or 20 per cent trichloracetic acid and removed at a later date. Occasionally it is safer to leave it.

A corneal foreign body in a child may require a general anesthetic for removal. If this is not possible, the foreign body can be allowed to slough out, in the meantime using an antibiotic ointment, homatropine drops, and a tight eye patch.

After removal of a corneal foreign body, an anti-

biotic such as sodium-sulfacetimide solution is instilled and a firm patch is applied. It is well to explain to the patient that he has a larger exposed area now to cause pain than he had before, so if pain recurs the only way to relieve it is to cover the other eye with a folded cloth, tie a cloth around the head over both eyes, take an aspirin, and be quiet for a couple of hours.

Corneal abrasions found by staining are treated in the same manner.

CONTUSION

An eye may be severely damaged by a blow from a blunt object and yet show very little externally. Often there may be blood in the anterior chamber. The pupil may be irregular and slightly dilated. If the media are clear, hemorrhage and edema may be seen in the retina.

If there are no lacerations or abrasions, no medication locally is required. Rest is the best treatment, and the best way to secure eye rest is a firm binocular bandage. Hemorrhage may occur after several days and is often severe. It may be accompanied by increased intraocular tension which will require the care of a specialist.

Perforating injuries are a serious condition and require hospitalization, x-ray examination, and operative repair.

LACERATIONS

Repair of lacerations of the lid should be accomplished in the first day or two. Contracture soon sets in, and what might have been a simple procedure becomes difficult and causes more deformity. No tissue should be removed unless absolutely necessary. Fine silk sutures are used. If the wound is vertical, a suture through the lid margins will help to realign the lids, then the tissue can be closed in layers, using fine catgut for the buried sutures.

If the cut is through the canaliculus, Sheie places a nylon suture into puncta canaliculus, through the sac, and out through the skin. This is tied in a loop after the skin is closed.

A laceration of the cornea is often accompanied by prolapse of the iris. If the iris is exposed, it should be pulled out a little and cut off flush with the cornea. If enough tension was used it will withdraw back into the anterior chamber. If it is just caught in a corneal wound, it can be pushed back inside. Large corneal wounds require sutures using 6-0 silk or catgut on the fine cutting needle.

Smaller openings can be closed by a conjunctival flap as follows: circumcision of conjunctiva at limbus for one-half the circumference, then undermining for 6 to 7 millimeters. This is drawn over the corneal laceration and sutured at the limbus. It will retract in 7 to 10 days. Atropin and antibiotics are used. It is well to cover both eyes the first day.

Permission should be obtained for an enucleation before you start to explore a badly injured eye.

The following are some of the indications when enucleation should be seriously considered:

1. Laceration through center of cornea extending into sclera and ciliary body, with damage to lens and vitreous; poor light projection.

2. Severe damage to eye with posterior perforation and poor light perception; intraocular foreign body.

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Fatal Fallacy: One for the road at the end of the day
Sharpens the wits and eases the way.

The Travelers 1956 Book of
Street and Highway Accident Data

Fatal Fallacy: The straightaway is the safer way.

The Travelers 1956 Book of
Street and Highway Accident Data

PRESIDENT'S PAGE

DEAR DOCTOR:

What is Public Relations?

It could be described as that continuous effort consciously exerted to create better public opinion.

The past years have found public relations playing a big part in every business field. This is also true in medicine.

The public desires to know more and more about medicine and its progress. It is therefore necessary to meet this demand.

A better understanding and cooperation is the best therapy in treating the disease. It is necessary for each of us to be a public relationist.

If we keep this in mind, I am sure our relationship with the public will be much improved.

Fraternally,

Clyde H. Miller M.D.

President

P. S. Be sure to register so you may vote for the party of your choice.

EDITORIAL COMMENT

Fatal Fallacies

Editor's Note—"Fatal Fallacies" is the title of the 22nd edition of a highway safety booklet now being distributed by the Travelers Insurance Companies, Hartford, Connecticut. The entire content of that booklet would be appropriate in this issue on trauma, but space permits the use of the following editorial only.

Safety was in the news in 1955. But death and destruction made the headlines. With foresight and ingenuity, safety was built into our automobiles to an extent never before accomplished. With skill and inventiveness, compelling slogans of care were broadcast through every medium of communications. With indifference and utter unconcern, the motoring public produced the greatest number of casualties in highway history.

Because of a slight decrease in deaths and injuries in 1954, there seemed some cause for optimism. However, this proved to be another of those fatal fallacies which characterize the field of highway safety. For in 1955, we compiled the regrettable total of 37,800 deaths, an increase of 6½ per cent over 1954, and 2,158,000 injuries, an increase of 10 per cent over 1954. Thus, the trend has reversed itself in what was the most safety-conscious year in our history.

These blunt and bloody statistics again substantiate the often repeated thesis of these booklets. In driving, there is no substitute for self-reliance. Safety belts, special padding, and other mechanical features all help but reliance on them is a fatal fallacy. Straighter, wider roads are welcome but reliance on them is a fatal fallacy. Reliance on the other driver or pedestrian to follow the rules of the road to the letter is a fatal fallacy. And by definition, a fatal fallacy is a mistaken belief that leads to disaster.

This is not to dismiss all the advances that have been made in alleviating the seriousness of accidents. Every one of these steps is a stride in the right direction. But it is the driver's mind harnessed to his reflexes; plus his body harnessed to his seat, which is going to produce fewer accidents. It is brainpower not horsepower; the power to steer and brake; not power steering or power braking which is the ultimate solution to the safety problem.

Again in 1955, we saw repeated the fatal fallacy of safety by decree. While the President's official S-D Day served a worthwhile purpose in focusing attention on our distressing highway habits, it did not cause the slightest decrease in the day's casualties. With individuals, businesses, and all media of communication emphasizing safety, the nation's motorists and pedestrians went about their business as usual. And as in 1954, S-D Day was followed by the most devastating Christmas weekend in history.

Toward the end of 1955, a serious attempt was made in some parts of the country to penalize more drastically those who deliberately flout the law. Stricter enforcement is a welcome trend, as it places serious practical difficulties in the path of the habitually careless driver. However, it would be a fatal fallacy to believe that punishment, any more than reward or appeal to the higher instincts of individuals is the sole solution to a mounting accident rate.

Safety is more than a slogan. It is an attitude of mind and a way of life. And as the road of all virtues is strewn with temptations, so is the path of safety. We call them fatal fallacies. The following are a few of the deadliest.

Pitting speed of reflexes against the modern automobile's super-horsepower.

Feeling free to "pour it on" on the straightaway, no matter how clear the day, how dry the road, how straight or wide the highway.

Driving while intoxicated or weary in the vain hope that the homing instinct will assure safe arrival.

Reliance on built-in safety features to compensate for lack of care.

Believing, with the supreme confidence born of experience, that rules of the road are meant for beginners.

These are just some of the fatal fallacies which caused grievous death and injury on the highways of America in 1955. More than 80 per cent of all casualties occurred in accidents where there was some driving violation.

This leads to the inescapable conclusion that accidents do not "just happen." And to believe that avoidance in the past means immunity in the future is the most fatal fallacy of all.

Tetanus in Kansas

In the past five years, 11 deaths were caused by tetanus in Kansas. In addition, there have been 14 cases reported in patients who survived.

This is a tragic story to relate about a disease which is preventable. The Kansas figures far exceed the number of cases and deaths from tetanus which occurred in the entire U. S. armed forces during World War II, despite the large number of casualties.

We all know that temporary passive immunity can be provided through the administration of 1500 to 3,000 units of tetanus antitoxin to an injured person. This will usually suffice to prevent the disease when given at the time of an accident.

We also all know that tetanus toxoid given in a series of two or three injections, approximately a month apart, will build long-term immunity. Then, at the time of an injury, the patient can be given adequate protection by a "booster" or recall injection of tetanus toxoid, rather than having to receive the more dangerous horse-serum antitoxin.

Immunization is best accomplished in infancy by giving three injections of tetanus toxoid, combined with pertussis vaccine and diphtheria toxoid. In adults it can be accomplished by immunization with tetanus toxoid, alone, or in combination with diphtheria toxoid.

In either instance, active immunization affords the opportunity to give a longer lasting, higher degree of protection without resorting to horse-serum.

A recent survey in one Kansas county revealed that fewer than 20 per cent of the entering first graders were adequately immunized.

As physicians, we must do something about this. We must immunize as many people as we can, particularly infants, but not be neglectful of any adults or older children we can reach.

Tetanus toxoid recall injections should be given routinely for any laceration or burn to those who have been actively immunized previously. The use of tetanus antitoxin for those who have not been previously immunized should be followed by the administration of a course of tetanus toxoid about one month after the injury.

The average cost of the care of a case of tetanus is approximately $2,000. The cost of the 25 cases reported to have occurred in Kansas from 1951-1955 would have purchased 2,500,000 immunizing doses of diphtheria-pertussis-tetanus toxoid—more than enough to give every person in the state an injection.

The reporting of tetanus is probably poor. From the mortality observed, it would seem likely that the state averages at least 10 cases per year.

In the 11 deaths which occurred, the total reduction in life expectancy was estimated at 427 years.

Let's do something about preventable diseases. Let's prevent them!—*Philip A. Bearg, M.D., State Epidemiologist, Kansas State Board of Health.*

Life Insurance

Among the services a medical society may bring to its membership is the advantage of group purchasing. For that reason the Kansas Medical Society has several times made health and accident benefits available.

Now an agreement has been reached with the American United Life Insurance Company of Indianapolis for a special purchase on life insurance. The Kansas agent is Mr. Otto Schnellbacher of Topeka. The plan was developed after years of exploration by your Committee on Medical Economics and approval by the House of Delegates.

The object is to give each member the chance to purchase a small amount of low cost life insurance without presenting evidence of insurability. This can now be done if 60 per cent of the eligible members enroll.

This is term insurance expiring at age 70. It accumulates no loan value and may or may not pay dividends according to the experience of this group. Dividends, if any, will be small, and your Society is asking that these be assigned to the Kansas Medical Society for whatever use the House of Delegates may select. Some suggested possibilities are a building fund, gift to A.M.E.F., or a reduction of dues.

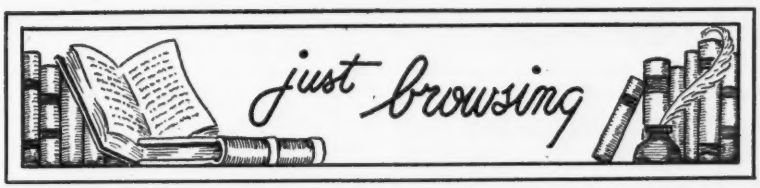
The program is not meant to replace any existing insurance but to serve as a low cost supplement to whatever else may be in force. The cost is $100 a year. The face value decreases annually to age 70, but it may be converted (without proof of physical fitness) at any time to age 65 for any other type of insurance. The face value is surprisingly large as shown on the announcement already received. It appears to your committee to be larger than could be privately purchased for an equal premium.

The policy is an individual non-cancellable policy that may be retained to its maturity or converted into other insurance if desired. To be eligible a doctor must belong to the Kansas Medical Society and be in active practice as of the day the program goes into effect. Beyond that, active practice or Society membership is not required. The policy cannot be cancelled by the company except for non-payment of premiums until the insured reaches age 70.

This life insurance project is more truly a program of the Society than are the other insurance programs in which the Society is interested because the Society will do the bookkeeping and collect the premiums. Upon the advice of the attorney for this Society and that of a tax attorney, this activity will not disturb the present tax status.

Enrollments are now being received. Participation is of course voluntary. It is hoped the project is attractive enough that each member will wish to enroll. Whenever 60 per cent of the eligible membership participates, the plan goes into effect. It is hoped this may be at an early date.

Sales of Series E and Series H Savings Bonds in Kansas in the first quarter of 1956 totaled $34,075,219. Those sales produced 35.9 per cent of the 1956 goal for Kansas, $94,900,000.



The story of curare being originally used as an arrow poison is well known—told often in connection with its more modern and more friendly use as a relaxing agent for medical purposes.

Less well known but also interesting are other types of arrow poisons and missiles on which they are used. The Jivaros Indians in South America have, since the 17th century, used poisoned darts and blowguns. Their use of the blowgun is exclusively in hunting and never in warfare; having been given to them for the purpose of obtaining game, to use it against man would bring bad luck!

"Short" blowguns are about 10 feet in length, longer ones as much as 15 feet. The longer ones are used for larger game, since they have longer range and greater accuracy, but carrying such a weapon through thick forest would present additional problems.

The manufacture of a blowgun is a painstaking process that cannot but excite the admiration of any "do-it-yourself" addict.

"When a man desires to make himself a blowgun, he first cuts down a suitable chonta palm which is allowed to dry in the sun for a week. . . . The thorns are removed . . . and [the trunk] is split in half. . . . Two strips, each about three inches in width, are split off and cut to the length desired. . . . With a machete these strips are shaved until they are straight and taper from one end to the other. One side of each is made flat while the other is rounded in such a fashion that when the two flat sides are placed together the two strips form a cylinder which tapers from about 1¼ inches in diameter at one end to three-quarters of an inch at the other.

"A perfectly straight cylindrical rod of chonta wood is prepared, approximately a quarter of an inch in diameter and slightly longer than the blowgun. A small, straight groove is scratched with a bone awl down the full length of each strip in the center of the flat side . . . using a sharp tooth [probably not his own—Ed.]. This groove is enlarged . . . until the two together are slightly less in diameter than the intended bore of the blowgun. The two halves are then placed face to face with the rod sandwiched between . . . and tied together with bark strips.

"Sand and water are then poured into the hollow. . . . The rod is worked back and forth . . . until the flat surfaces of the two chonta strips meet. . . . The bore is then of the size desired."

A glue is made, fastening the two halves together. Then they are wrapped spirally and covered with a coating of "charora," giving it a glossy surface.

". . . The large end of the blowgun for a length of two inches is dressed down until a small cylinder projects which is slightly larger than the bore. A bone mouthpiece is fitted snugly over this. . . . Another small lump of charora in the form of a small mound is applied to the barrel about a foot from the mouthpiece. The two incisor teeth of a watusa are then imbedded in this . . . as the blowgun sight.

"Finally the bore is polished by drawing the blowgun back and forth over a rattan strip to which a wad of cotton or balsa floss is attached . . . and the blowgun is ready for use.

"In using the blowgun it is held with both hands, palms down, close to the mouth, with the sight held uppermost. The bone mouthpiece is placed to the lips and a slight puff is sufficient to speed the dart on its way. . . . The maximum effective range of an average blowgun is about 45 yards. . . .

"Darts are made from the midribs of the ivory nut palm . . . cut into the proper length, which is measured from the base of the palm of the hand to the crook of the elbow . . . have a diameter equal to that of a common match. . . . Poison is necessary to make the darts effective, except when shooting small birds. . . . A circular cut [is made] around the dart about an inch from the point so that this section will break off in the wound."

Perhaps this information will be available in time that local nimrods can hunt quail and pheasant with blowguns this fall!—*O.R.C.*

(Ciba Symposia, October, 1941)

Tumor Conference

Islet Cell Tumors

Edited by FRANK Q. WINGFIELD, M.D.

Dr. Stowell: These two patients present unusual tumors which are of especial interest because of their symptomatology and clinical and laboratory diagnosis. The first case is that of a benign functioning islet cell tumor causing classical symptoms. The second, however, is malignant and non-functional, and the possibility of a diagnosis of carcinoid instead of islet cell tumor must be seriously considered.

Mr. Lynch (medical student): The chief complaints of this 76-year-old colored man (J. H.) were spells of irrational behavior and weakness. Except for a diagnosis of hypertension made 13 years prior to this admission, he had been in good health for almost 49 years. About 15 months prior to admission he had finished work and was changing his clothes when he had an attack characterized by flailing movements of the extremities, profuse sweating, and irrational behavior, but no convulsions. He had two to three similar attacks a month for almost a year and then began to have about one attack per day. There were remissions lasting up to one week, however.

He was hospitalized 14 months prior to this admission, and at that time the physical and laboratory examinations revealed nothing diagnostic. He was discharged on a high protein, high fat, low carbohydrate diet. He soon discovered that he was unable to maintain this diet and began to drink orange juice or eat candy whenever one of these attacks appeared to be coming on. This quickly relieved the attacks. He subsequently gained 37 pounds in one year.

He was seen again one month prior to this present admission, at which time abdominal distention had occurred, and the examiner believed that he felt a large cystic mass almost 15 cm. in diameter in the upper mid-epigastrium. He was then readmitted to the hospital. At the time of his admission, his blood pressure was 180/90. He was an obese colored man who appeared in good health, and the only positive findings were a grade 2 arteriosclerotic retinopathy and an ill-defined 15 cm. mass in his epigastrium which was not movable, not hard, and not fluctuant. It was considered to be either a pancreatic cyst or, more probably, abdominal fat.

Other blood findings including serum lipase and serum amylase were normal. A glucose-tolerance test showed a curve characterized by a low fasting blood sugar of 52 mgm. per cent, a moderate elevation the first hour, a leveling off at 70 to 80 mgm. per cent, and a final reading on a sixth specimen of 32 mg. per cent. This was considered diagnostic of a functioning pancreatic islet cell tumor or diffuse hyperinsulinism, but not of a reactive type hyperinsulinism since his fasting blood glucose was low. Abdominal, chest, and kidney-ureter-bladder x-ray films were negative.

On his seventh hospital day a tumor, which shelled out easily, was removed from the junction of the body and tail of the pancreas. The blood sugar on the day following operation was 260 mg. per cent. The second post-operative day he developed a high pulse rate and rapid respirations. His blood sugar continued to be elevated and on his third post-operative day was 380 mg. per cent. He was maintained on regular insulin therapy, 50 units on the second post-operative day; 40 units on the third post-operative day; and 20 units on the fourth post-operative day. His urine showed 3 to 4 plus sugar

Figure 1. External view of islet cell tumor of the pancreas in first case.

Cancer teaching activities at the University of Kansas Medical Center are aided by grants from the National Cancer Institute, U. S. Public Health Service, and the Kansas Division of the American Cancer Society. Dr. Wingfield is a Trainee of the National Cancer Institute.

during this time. The patient's blood glucose then became stabilized on his seventh post-operative day, and insulin therapy was discontinued. His blood sugar then was 173 mgm. per cent.

Dr. Boley: The surgical specimen consisted of a 2 cm. lobulated mass. At one pole there was a grayish-brown, moderately firm, encapsulated nodule measuring 1 cm. in diameter (Figure 1). Microscopic examination shows that there is compression and atrophy of the pancreas surrounding the tumor. The tumor cells are a little larger than the typical cells in the islets of Langerhans in the pancreas. There is little variation in the cells.

In some areas the tumor does not appear to be well encapsulated (Figure 2), which is regarded by some

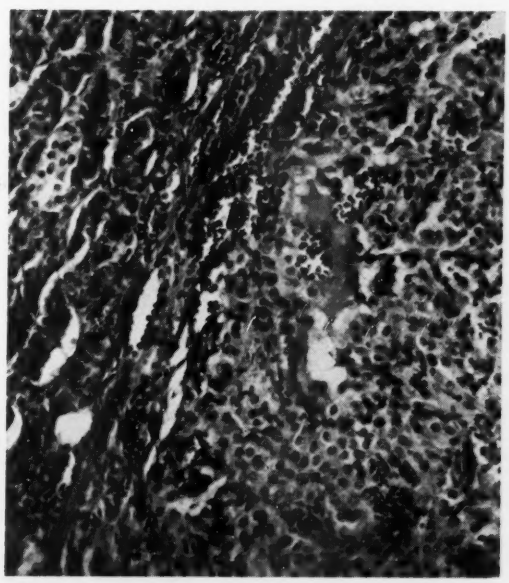


Figure 2. Islet cell tumor on right is poorly encapsulated from pancreas on left in first case. X 175

as an indication of malignancy. Franz reviewed the literature in 1940 and reported 96 cases, four of which actually showed malignant change.[1] With two other cases recently described, this makes a total of six reported functioning islet cell tumors with liver and lymph node metastases.[2] The microscopic diagnosis in this case is a benign islet cell tumor of the pancreas.

Dr. Robinson: Is this post-operative elevation of blood sugar an expression of the suppression of the normal insulin from the remainder of the pancreas because of the excessive secretion of the tumor?

Dr. Leo: Yes, that is probably the cause. One must also consider the effects of surgical trauma to the pancreas. Multiple islet cell tumors occur in about 15 per cent of cases, so we had to visualize the entire pancreas, palpate it on both surfaces, and reflect it upward and laterally to palpate the posterior surface. Therefore, pancreatic edema may also be a factor.

Dr. Stowell: The first case was one that could be diagnosed by clinical laboratory tests and confirmed by the pathologist. The second case presented a much more difficult problem for both the clinician and pathologist and simulates in some respects the carcinoid syndrome.

Miss Kells (medical student): This patient (E. W.) is a 46-year-old white woman who was first admitted to the hospital with the chief complaint of episodes of nausea and vomiting, intermittent diarrhea, and an enlarged liver.

Nine years prior to admission the patient had an appendectomy for acute appendicitis. Since that time she has had episodes of nausea and vomiting three or four times a year, in which she vomited clear fluid. She had always had trouble with constipation until two years ago when she began to have diarrhea which was characterized by one loose, watery brown stool occurring each day before breakfast.

Seven months prior to this admission she was hospitalized for one month because of nausea and vomiting. At that time a diagnosis of duodenal ulcer was made, and she was put on a bland diet and given antiacids and antispasmotics for six weeks, which relieved her symptoms. The etiology of the diarrhea was unexplained. During the past six months the diarrhea increased to five or six loose movements per day, some of which were foamy and contained undigested food particles. She was again hospitalized, two months prior to this admission, for nausea, vomiting, and diarrhea, and at that time x-rays of the kidneys, colon, and stomach were normal. She was treated with antiamoebic medications although no amoebae were found in the stools.

Three weeks prior to her present admission, in addition to nausea, vomiting, malaise, and fatigue, she complained of cramping abdominal pain in the left upper quadrant which at times seemed to be related to her diarrhea and at other times did not. The pain shifted to the lower abdominal quadrants, back again to the left upper quadrant, and then disappeared. Her physician suggested that she be hospitalized.

She gave no history of jaundice, melena, hematemesis, anorexia, or food intolerance. She had lost five pounds in the last six months. She does not drink alcohol and has not been exposed to any hepatotoxic agents. She has been taking estrogen therapy for hot flashes and other menopausal symptoms without relief.

Physical examination revealed a well developed rather thin lady who was not jaundiced. The positive physical findings were palmar erythema and

an enlarged nodular tender liver extending four finger breadths below the costal margin and over which a bruit could be heard. The ovaries were palpated and felt to be enlarged and cystic.

Blood findings were essentially normal. The urinalyses showed faint traces of albumin and on one occasion 15 to 20 red blood cells per high power field. The serum chlorides were decreased to 90 mEq/L. A gastric analysis showed a fasting free acid of 114° and an acid of 130° at three hours. The glucose tolerance test was normal. There was no glycosuria except at the third hour when there was a trace. The urinary urobilinogen was slightly increased. The stools were negative for ova and parasites. They were tested for occult blood four times, and on one occasion a faint trace of blood was found. The serum amylase was elevated to 312 units, and the serum lipase was elevated to 2.5 units. Liver function tests were normal.

The chest plate showed emphysema and moderate fibrosis of the lungs. X-rays of the urinary tract and the gallbladder were considered negative. The upper gastrointestinal films showed considerable fluid in the stomach, pylorospasm, and narrowing of the duodenal bulb and, although there was no ulcer crater visualized, a diagnosis of duodenal ulcer was made. A barium enema showed a smooth filling defect in the sigmoid colon. A sigmoidoscopic examination was negative. An electrocardiogram showed a grade I block at the atrioventricular node. An exploratory laparotomy was performed on the 14th hospital day.

Dr. Stowell: Why was the operation done?

Miss Kells: There were many doctors who saw this patient, and there were quite a few diagnoses. The diagnoses considered by the surgeons were hemangioma of the liver, endometriosis, or metastases to the liver from a carcinoma of the colon. The internists thought that she had cirrhosis of the liver.

Dr. Hardin: What was the character of the bruit?

Dr. Leo: A systolic bruit heard just over the liver.

Dr. Hardin: Is she still having menstrual periods?

Miss Kells: Yes. The gynecologic consultant reported enlarged cystic ovaries.

Dr. Stowell: Dr. Leo, would you describe the gross findings at operation?

Dr. Leo: We found multiple metastases throughout both lobes of the liver which were rather soft, smooth, and did not have the characteristic yellow necrotic appearance usually associated with a metastatic adenocarcinoma. The nodules were of different sizes, the largest of which was approximately 4 cm. There was a large mass in the body of the pancreas measuring approximately 6 cm. in size. I am surprised that we could palpate it preoperatively. The other viscera were essentially normal except for bilateral cystic ovaries, one of which we removed. The liver did not appear cirrhotic.

Dr. Hardin: What was the source of the bruit?

Dr. Leo: It was deep in the retroperitoneal space and probably due to tumor encroaching on the celiac artery.

Dr. Stowell: Dr. Boley, will you describe the findings on examination of the surgical specimens?

Dr. Boley: There were several cysts in the ovary which were filled with thick black fluid and lined by endometrial stroma and epithelium. Therefore, one diagnosis is endometriosis of the ovary.

The tumor in the liver, instead of being friable like adenocarcinoma of the bowel, was rather rubbery due to the abundant fibrous tissue. The tumor consists of nests of cells with surrounding fibrous stroma (Figure 3). The cells are rather uniform but still show enough variation to make one think that they are malignant. This is interpreted as metastatic tumor since the finding of a uniform type of primary sclerosing carcinoma in a non-cirrhotic liver would be most unusual.

There are two tumors that we must consider. One is that this is a carcinoid from the appendix or the ileum. The slides of the previously removed appendix are not available for study. A carcinoid of the ileum could be overlooked by palpation. Carcinoid tumors metastasize to the pancreas and also may originate there.[3] The other possibility is that this is an islet cell tumor of the pancreas, especially since they found a

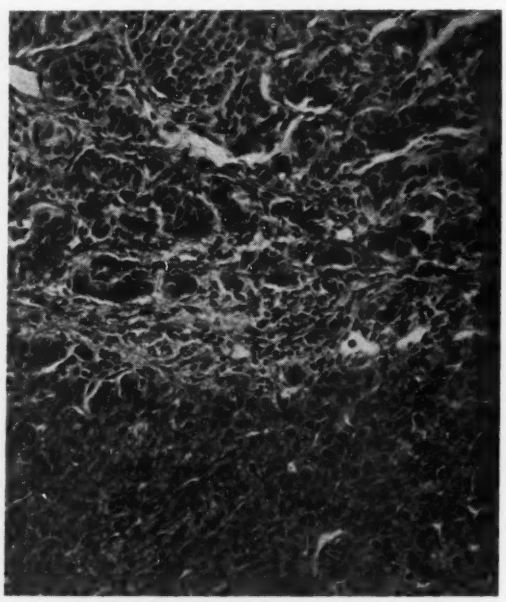


Figure 3. Metastatic tumor (above) in liver from second case. X 175

fairly large tumor in the pancreas. In some places the nests of cells form partial rosettes. A small percentage of islet cell tumors have been shown to form true rosettes,[1] but so do some carcinoid tumors.[3] A somewhat similar pattern is seen in granulosa cell tumor of the ovary and neuroblastoma. The enlarged ovary was examined, and the other ovary was normal in size. She had no evidence of a neuroblastoma. On the evidence presented, I considered this a malignant islet cell tumor of the pancreas.

The argentaffin cells of the mucosa of the intestinal tract, which have silver staining granules, have been identified as the source of a hormone known as serotonin. Carcinoid tumors are composed of these cells, and large carcinoid tumors with metastases have been shown to produce a high level of this material in the blood.[4] Serotonin is normally metabolized in the liver, and in patients with extensive liver metastases the level is especially high.[4] Thus, the blood serotonin concentration is altered by the number and functional activity of cells producing serotonin and by the rate of its destruction in the liver. The cells in this tumor did not have positive staining granules. Malignant carcinoid tumors without silver staining granules do occur, however.[5] Despite the negative stain the finding of a high level of 5-hydroxy-3-indoleacetic acid, which is the breakdown product of serotonin, in the urine would change the diagnosis to malignant carcinoid.[4] How much actual exploration of the gastrointestinal tract was done to rule out the possibility of a carcinoid, and was the urine test done?

Dr. Leo: We checked the colon and small bowel carefully and they revealed no evidence of tumor. The urinary 5-hydroxy-3-indoleacetic acid was 4 gms/24 hours. (Normal 2-8 gms/24 hours.)*

Dr. Hardin: Dr. Klotz, what do you think about the high gastric acidity in relation to an islet cell tumor?

Dr. Klotz: I think that we see the type of gastric acid pattern obtained in this patient too frequently in otherwise normal individuals to put much emphasis on it in this particular instance. In cases with hypoglycemia, which was not clinically demonstrated in this woman, the production of acid gastric juice may be greatly increased. In some instances of marked and prolonged hypoglycemia, due to any cause, there may be a generalized increase in gastric acidity.

Dr. Stowell: Can you explain her presenting complaints on the basis of an islet cell or malignant carcinoid tumor?

Dr. Klotz: I don't think so. It is possible that steatorrhea could have accounted for her diarrhea. If this was not steatorrhea and there was no invasion of the gastrointestinal tract, we can diagnose only a functional diarrhea which may have been influenced by her primary illness.

I have seen cases of pancreatic carcinoma in which pain was present for a while, disappeared, and then returned. I have not seen it with a pattern similar to the one seen in this case.

One significant laboratory finding that might have been given a little more attention is the elevated lipase.

Dr. Boley: Could this tumor have destroyed enough of the pancreas to cause steatorrhea?

Dr. Klotz: I don't think so from the description of what was found at operation. Using acute pancreatitis or chronic relapsing pancreatitis as a basis for comparison, a great deal of damage must occur to the pancreas before steatorrhea will appear. There can be a brief period of functional steatorrhea accompanying mild acute pancreatitis, but this usually clears up in a few days and the stools become normal again as far as the quantity of fecal fat is concerned. The pancreas, like the liver, has considerable reserve.

In some patients with carcinoid tumors of the gastrointestinal tract associated with increased levels of circulating serotonin, a bizarre clinical history has resulted that has been difficult to interpret. These patients have episodes of bronchoconstriction, flushing and palpitation, a cyanotic hue to the skin during an attack, diarrhea, and telangiectasis of the face and neck. Massage over the carcinoid or over metastases in the liver may precipitate one of these attacks.[4, 5] In some cases they also develop pulmonic and tricuspid valvular lesions and arthritic symptoms.[4] These symptoms can now be explained by the increased level of serotonin in the blood. Serotonin is normally found in the serum bound to the platelets and is considered to be important in the blood clotting mechanism.[8] It also has been shown by its effect on smooth muscle to cause increased motility of the gastrointestinal tract,[9] bronchoconstriction[4] and vasodilatation.[4]

Dr. Stowell: Dr. Mantz, does the absence of elevated urinary 5-hydroxy-3-indoleacetic acid rule out carcinoid in this case, or can carcinoids be nonfunctioning?

Dr. Mantz: The normal finding[6] in this case makes it seem unlikely that the patient's chronic diarrhea is on the basis of carcinoid tumor. It has been shown that the majority of nonargentophilic carcinoids do not elaborate serotonin, whereas ones with silver-positive granules frequently do.[5] While the absence of elevated serotonin breakdown products in the urine does not exclude carcinoid tumor involving the liver in this case, it is ancillary evidence favoring a pancreatic islet cell origin of the lesion.

Dr. Stowell: These cases seemingly represent two

* Grateful acknowledgment is made to Dr. E. M. Speeter of Upjohn Company for samples of serotonin and 5-hydroxy-3-indoleacetic acid.

ACHROMYCIN

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The prevention and control of cellulitis, abscess formation, and generalized sepsis has become commonplace technique in surgery since ACHROMYCIN has been available. Leading investigators have documented such findings in the literature.

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[1]Albertson, H.A. and Trout, H. H., Jr.: *Antibiotics Annual* 1954-55, Medical Encyclopedia, Inc., New York, N.Y., 1955, pp. 599-602.

[2]Prigot, A.; Whitaker, J. C.; Shidlovsky, B. A., and Marmell, M.: *ibid*, pp. 603-607.

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interesting examples of islet cell tumors, one functional and benign and one non-functional and malignant. I think the second case is of special interest. In this patient with substantial metastasis to the liver, we are not able to relate this rather extensive carcinoma directly to the gastrointestinal symptoms that brought the patient into the hospital.

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PHYSICIANS' ACTIVITIES

Dr. Edward X. Crowley, Wichita, was guest speaker at a recent meeting of the Sedgwick County Medical Assistants' Society. His subject was cancer.

Governor Fred Hall recently appointed two physicians to the Kansas State Board of Medical Registration and Examination, **Dr. Harvey L. Bogan** of Baxter Springs and **Dr. Frederick E. Wrightman** of Sabetha.

Dr. A. A. Fink, Topeka, was one of the speakers at a recent convention of the Kansas Society of Medical Technologists in Topeka.

A community dinner at Goodland last month gave honor to **Dr. Marion J. Renner,** a physician there for 30 years. The Registered Nurses Club of Goodland sponsored the event. **Dr. Arthur C. Gulick, Dr. H. M. Steever,** and **Dr. Dale D. Vermillion** took part in the program.

Dr. Leonard R. Diehl, who has been practicing in Osborne for three years, has moved to Oklahoma City.

A memorial honoring the late **Dr. Charles H. Lerrigo,** Topeka, is being established by the Kansas Tuberculosis and Health Association. The memorial will be the Lerrigo Research Laboratory at the University of Kansas Medical Center.

Dr. Phillip W. Russell, Wichita, has been awarded the Brower Traveling Scholarship of the American College of Physicians for 1956. He will work on hormone research at the Mayo Clinic.

Dr. Marion A. Throckmorton, formerly of the Hertzler Clinic, Halstead, is now practicing in Wichita.

The American College of Physicians announces that **Dr. Henry B. Stryker, Jr.,** Concordia, was accepted as an associate at the College's recent meeting in California.

Dr. William J. Reals, Wichita, was guest lecturer at a postgraduate assembly held recently at Creighton University Medical School, Omaha. He spoke on "Thyroid Tumors and Protein Bound Iodine Determinations."

Dr. Jack M. Catlett, Emporia, was Medical Education Week speaker in his home community. He explained to students of the Emporia schools the requirements for entering medical school, outlined the curriculum, and told of the preceptorship program at the University of Kansas School of Medicine.

A physician who left Ellinwood recently to serve with the Air Force, **Dr. James G. Gaume,** is now engaged in experiments in the field of space medicine. A series of articles in the *Houston Chronicle* recently told of tests in which Dr. Gaume is participating.

In observance of Medical Education Week, **Dr. Ernest W. Crow,** Wichita, addressed the Wichita Exchange Club on that subject.

Dr. A. E. Hiebert, Wichita, attended President Eisenhower's Conference on Occupational Safety in Washington, May 14-16.

Health officers recently appointed by their respective county boards of commissioners include the fol-

lowing: **Dr. Vale Page,** Plainville, Rooks County; **Dr. Chester M. Nelson,** Oberlin, Decatur County; **Dr. Lyle G. Glenn,** Protection, Comanche County; **Dr. Andrew M. Shelton,** Jetmore, and **Dr. Emery T. Gertson,** Atwood, Hodgeman County.

Dr. Carl C. Gunter and **Dr. Herman W. Hiesterman,** Quinter, took part in a television program over KMBC-TV on April 22. **Dr. Franklin D. Murphy,** chancellor of the University of Kansas, moderated the panel discussion on rural health.

The Southern Society of Anesthesiologists, meeting recently in Augusta, Georgia, re-elected **Dr. Ray T. Parmley,** Wichita, secretary-treasurer of the organization.

Dr. Roy R. Shoaf, Lawrence, will go to Chicago late this month to begin a three-year residency in obstetrics and gynecology at the Illinois University Medical School and the Cook County Hospital.

Dr. J. P. Berger, Dr. William J. Reals, Dr. Russell A. Nelson, and **Dr. Thomas Fender,** Wichita, participated in a panel discussion on the need for more doctors over station KAKE-TV on April 17. The program was sponsored by Wichita University.

The Topeka Rotary Club's Man of the Month award was given in May to **Dr. Homer L. Hiebert** for his community service in nurturing the idea of Topeka's first science fair.

Members of the Rice County Medical Assistants' Society were guests of **Dr. R. E. Bula,** Lyons, at a dinner meeting last month.

Dr. Monti L. Belot, Jr., Lawrence, addressed the May meeting of the Douglas County Medical Assistants' Society on the subject of "Heart Sounds."

Dr. Ralph I. Canuteson, Lawrence, was re-elected president of the Kansas Tuberculosis and Health Association at the organization's annual meeting. **Dr. F. A. Trump,** Ottawa, was named to serve again on the board of directors.

Dr. Leslie E. Knapp, Wichita, was guest speaker at a meeting of the Kay-Noble Medical Society at Blackwell, Oklahoma, recently. His topic was "Acute Appendicitis and Some of Its Complications."

The story of medical progress during the past 50 years was told to the Wichita Kiwanis Club last month by **Dr. Vernon E. Wilson,** assistant dean at the University of Kansas School of Medicine.

Dr. D. Cramer Reed, Wichita, was guest speaker at a recent meeting of the Downtown Optimist Club in Wichita. His subject was medical education and the supply of physicians.

DEATH NOTICES

Estella Edwards Conover, M.D.

Dr. E. E. Conover, 74, who retired from practice in Cedar Vale in 1949 because of poor health, died at a hospital in Bethesda, Maryland, on April 28. She lived in Winfield after her retirement and was an honorary member of the Cowley County Medical Society. After her graduation from Bennett Medical College, Chicago, in 1910, she practiced in association with her husband, Dr. Robert S. Edwards, until his death in 1944. She was married to J. A. Conover in 1953 and since then had lived in Maryland.

James Branson Weaver, M.D.

Dr. J. B. Weaver, 58, head of the Department of Orthopedics at the University of Kansas School of Medicine, died on April 30. He was an active member of the Johnson County Medical Society.

Dr. Weaver was graduated from the University of Kansas School of Medicine in 1925, served his internship in New York, and did postgraduate work in Liverpool and Vienna. In 1927 he became a member of the faculty at the Kansas school. During World War II he was surgical chief of the 77th Evacuation Hospital Unit, and he was awarded the Legion of Merit for his service in England, Africa, France, Sicily, Belgium, and Germany.

For 30 years he had worked with the Kansas Crippled Children Commission, and for three years he had served on its board. He was a diplomate of the American Board of Orthopedic Surgery, a member of the Clinical Orthopedic Society, and a member of the American Academy of Orthopedic Surgeons.

Committees for 1956-1957

Allied Groups

C. R. Rombold, Wichita, Chairman; J. J. Basham, Fort Scott; C. H. Benage, Pittsburg; H. O. Bullock, Independence; W. M. Cole, Wellington; R. D. Dickson, Topeka; F. B. Emery, Concordia; J. H. Holt, Wichita; H. F. Janzen, Hillsboro; G. D. Marshall, Colby; J. Neuenschwander, Hoxie; R. H. O'Donnell, Ellsworth; R. E. Stowell, Kansas City; S. L. Vander Velde, Emporia.

Anesthesiology

M. M. Tinterow, Wichita, Chairman; H. H. Hyndman, Wichita; P. H. Lorhan, Kansas City; W. O. Martin, Topeka; L. W. Owen, Wichita; W. Stephenson, Norton; E. M. Sutton, Salina.

Auxiliary

C. O. West, Kansas City, Chairman; W. J. Biermann, Wichita; C. V. Black, Pratt; E. M. Harms, Wichita; B. A. Nelson, Manhattan; R. E. Pfuetze, Topeka; C. E. Stevenson, Neodesha; I. J. Waxse, Oswego.

Blue Shield Fee Schedule

A. G. Isaac, Newton, Chairman, Urology; W. L. Beller, Topeka, Radiology; H. J. Brown, Winfield, Anesthesiology; D. R. Davis, Emporia, Pediatrics; K. L. Druet, Salina, Internal Medicine; T. L. Foster, Halstead, Psychiatry; N. L. Francis, Wichita, ENT; W. H. Fritzemeier, Wichita, Dermatology; J. E. Hill, Arkansas City, Ophthalmology; G. B. Joyce, Topeka, Orthopedics; J. G. Kendrick, Wichita, Obstetrics and Gynecology; R. G. Klein, Dodge City, General Surgery; W. R. Lentz, Seneca, General Practice; C. A. Newman, Topeka, General Practice; W. J. Reals, Wichita, Pathology.

Blue Shield Relations

D. G. Laury, Ottawa, Chairman; A. W. Beahm, Great Bend; P. L. Beiderwell, Belleville; M. A. Brewer, Ulysses; E. W. Christmann, Wamego; J. H. Coffman, Oberlin; J. A. Dunagin, Topeka; W. A. Grosjean, Winfield; P. Irby, Fort Scott; J. L. McGovern, Wellington; J. H. McNickle, Ashland; J. L. Morgan, Emporia; R. T. Nichols, Hiawatha; W. J. Pettijohn, Russell; H. R. Schmidt, Newton; L. N. Speer, Kansas City; C. M. White, Wichita.

Centennial

T. P. Butcher, Emporia, Chairman; Shawnee County Chairman; E. W. Crow, Wichita; W. M. Mills, Topeka; B. A. Nelson, Manhattan; G. R. Peters, Kansas City; R. Sohlberg, Jr., McPherson; W. C. Wescoe, Kansas City.

Child Welfare

D. R. Davis, Emporia, Chairman; W. H. Crouch, Topeka; W. P. Hibbett, McPherson; E. D. Hinshaw, Arkansas City; T. C. Hurst, Wichita; A. C. Irby, Fort Scott; H. P. Jubelt, Manhattan; W. F. McGuire, Wichita; O. L. Martin, Salina; L. N. Speer, Kansas City; H. J. Williams, Osage City.

Conservation of Eyesight

W. M. Scales, Hutchinson, Chairman; B. J. Ashley, Topeka; L. L. Calkins, Kansas City; M. A. Carter, Wichita; J. E. Hill, Arkansas City; D. O. Howard, Wichita; M. S. Lake, Salina; D. T. Loy, Great Bend; H. E. Morgan, Newton; D. P. Trimble, Emporia; D. D. Vermillion, Goodland.

Conservation of Hearing and Speech

R. Montgomery-Short, Halstead, Chairman; C. W. Armstrong, Salina; J. A. Budetti, Wichita; C. L. Gray, Wichita; E. E. Miller, Pittsburg; V. R. Moorman, Hutchinson; W. D. Pitman, Pratt; G. O. Proud, Kansas City; R. E. Riederer, Olathe.

Constitution and Rules

A. W. Fegtly, Wichita, Chairman; H. S. Bowman, Wichita; G. L. Thorpe, Wichita; H. B. Vallette, Beloit; C. E. Vestle, Humboldt.

Control of Cancer

D. C. Reed, Wichita, Chairman; J. P. Berger, Wichita; C. G. Bly, Kansas City; T. P. Butcher, Emporia; A. M. Cherner, Hays; J. C. Dysart, Sterling; A. A. Fink, Topeka; W. A. Grosjean, Winfield; H. L. Hiebert, Topeka; W. J. Kiser, Wichita; J. R. Kline, Wichita; C. H. Miller, Parsons; N. C. Nash, Wichita; R. H. Riedel, Topeka; L. E. Vin Zant, Wichita; H. M. Wiley, Garden City.

Control of Tuberculosis

J. W. Spearing, Columbus, Chairman; A. L. Ashmore, Wichita; A. Baude, Topeka; J. A. Butin, Chanute; R. I. Canuteson, Lawrence; M. J. FitzPatrick, Kansas City; J. L. Morgan, Emporia; C. Pokorny, Halstead; C. F. Taylor, Norton; P. H. Wedin, Wichita.

Emergency Medical Care

D. P. Trees, Wichita, Chairman; G. L. Ashley, Chanute; A. H. Bacon, Wichita; K. F. Bascom, Manhattan; F. C. Beelman, Topeka; R. M. Brooker, Topeka; L. F. Glaser, Hutchinson; A. E. Hiebert, Wichita; H. H. Hyndman, Wichita; G. E. Manahan, Lawrence; G. R. Peters, Kansas City; W. A. Smiley, Jr., Junction City; R. E. Speirs, Dodge City; J. F. Thurlow, Hays.

Endowment

C. V. Black, Pratt, Chairman; J. A. Howell, Wellington; D. C. McCarty, Medicine Lodge; R. A. Nelson, Wichita; J. W. Randell, Marysville.

Executive

C. W. Miller, Wichita; B. A. Nelson, Manhattan; C. M. Barnes, Seneca; G. E. Burket, Jr., Kingman; J. L. Lattimore, Topeka.

General Practice Award

G. L. Thorpe, Wichita, Chairman; C. M. Barnes, Seneca; C. W. Bowen, Topeka; L. G. Glenn, Protection; A. C. Harms, Kansas City; L. E. Leigh, Overland Park.

History

W. M. Mills, Topeka, Chairman; J. F. Barr, Ottawa; H. C. Clark, Wichita; R. R. Melton, Marion; C. C. Nesselrode, Kansas City; R. A. Schwegler, Lawrence; G. S. Voorhees, Leavenworth.

Hospital Survey

R. W. Myers, Newton, Chairman; A. C. Armitage, Hutchinson; L. E. Beal, Fredonia; E. Beebe, Olathe; W. M. Campion, Liberal; P. S. Combs, Leavenworth; E. R. Gelvin, Concordia; E. T. Gertson, Atwood; G. F. Gsell, Wichita; H. S. O'Donnell, Ellsworth; A. J. Rettenmaier, Kansas City; A. E. Rueb, Salina; R. E. White, Garnett; J. K. Wisdom, Wichita.

Industrial Medicine

W. L. Anderson, Atchison, Chairman; E. S. Brinton, Wichita; I. W. Cain, Kansas City; L. A. Donnell, Wichita; J. A. Grove, Newton; A. R. Mueller, Leavenworth; J. H. A. Peck, St. Francis; H. L. Regier, Kansas City; M. F. Russell, Great Bend; R. W. Urie, Parsons.

Maternal Welfare

E. X. Crowley, Wichita, Chairman; L. E. Filkin, Concordia; H. M. Floersch, Kansas City; H. M. Foster, Hays; R. G. Heasty, Manhattan; R. L. Hermes, Lawrence; J. S. Menaker, Wichita; R. Sohlberg, Jr., McPherson; D. L. Tappen, Topeka.

Medical Assistants

M. C. Eddy, Hays, Chairman; L. G. Allen, Jr., Kansas City; A. C. Armitage, Hutchinson; R. E. Bula, Lyons; W. P. Callahan, Sr., Wichita; K. J. Gleason, Independence; H. U. Kennedy, Topeka; F. E. Nyberg, Wichita; M. E. Schulz, Russell.

Medical Economics

G. E. Kassebaum, El Dorado, Chairman; G. B. Athy, Columbus; A. H. Baum, Dodge City; J. N. Blank, Hutchinson; G. F. Corrigan, Wichita; O. W. Longwood, Stafford; M. B. Miller, Topeka; J. C. Mitchell, Salina; B. A. Nelson, Manhattan; L. S. Nelson, Jr., Salina; R. T. Parmley, Wichita; F. G. Schenck, Burlingame; C. H. Steele, Kansas City.

Medical Practice Act

L. R. Pyle, Topeka, Chairman; J. D. Colt, Jr., Manhattan; N. L. Francis, Wichita; J. A. McClure, Topeka; N. E. Melencamp, Dodge City; C. W. Miller, Wichita; L. S. Nelson, Sr., Salina; L. F. Schmaus, Iola; Attorneys for the Society and for the Board.

Medical Schools

R. W. Fernie, Hutchinson, Chairman; R. G. Ball, Manhattan; M. E. Christmann, Pratt; E. W. Crow, Wichita; O. W. Davidson, Kansas City; N. M. Jenkins, Salina; L. C. Joslin, Harper; D. Marchbanks, Hill City; B. P. Meeker, Wichita.

Mental Health

W. F. Roth, Jr., Kansas City, Chairman; A. J. Adams, Wichita; H. V. Bair, Parsons; A. P. Bay, Topeka; O. R. Cram, Jr., Larned; J. A. Dunagin, Topeka; D. B. Foster, Topeka; T. L. Foster, Halstead; M. T. Glassen, Phillipsburg; E. D. Greenwood, Topeka; L. W. Hatton, Salina; T. R. Hood, Topeka; G. W. Jackson, Topeka; P. C. Laybourne, Jr., Kansas City; R. A. Moon, Prairie Village; R. F. Schneider, Kansas City; D. R. Wall, Wichita; E. M. Wright, Lawrence.

Necrology

O. R. Clark, Topeka, Chairman; D. E. Gray, Topeka; R. Greer, Topeka; D. Lawson, Topeka; J. A. Segerson, Topeka.

Pathology

B. E. Stofer, Wichita, Chairman; A. A. Fink, Topeka; T. R. Hamilton, Kansas City; C. A. Hellwig, Halstead; C. J. Weber, Salina.

Postgraduate Study

E. L. Mills, Wichita, Chairman; W. H. Algie, Kansas City; G. E. Burket, Jr., Kingman; M. F. Delp, Kansas City; D. Lawson, Topeka.

Public Policy

To meet at call of president. C. M. Barnes, Seneca; C. H. Benage, Pittsburg; W. F. Bernstorf, Winfield; W. P. Callahan, Sr., Wichita; O. W. Davidson, Kansas City; M. C. Eddy, Hays; E. S. Edgerton, Wichita; J. F. Gsell, Wichita; J. L. Lattimore, Topeka; F. L. Loveland, Topeka; N. E. Melencamp, Dodge City; W. M. Mills, Topeka; L. S. Nelson, Sr., Salina; C. C. Nesselrode, Kansas City; J. H. A. Peck, St. Francis; L. R. Pyle, Topeka; H. N. Tihen, Wichita, and Members of Executive Committee.

Public Relations

D. E. Gray, Topeka, Chairman; A. L. Ashmore, Wichita; N. L. Francis, Wichita; C. C. Gunter, Quinter; J. D. McMillion, Coffeyville; J. W. Manley, Kansas City; V. R. Moorman, Hutchinson; E. Myers, Iola; J. G. Phipps, Wichita; C. O. Stensaas, Arkansas City; V. E. Wilson, Kansas City.

Rural Health

V. E. Brown, Sabetha, Chairman; H. L. Bogan, Baxter Springs; M. F. Frederick, Hugoton; R. E. Grene, La Crosse; H. W. Hiesterman, Quinter; F. Law, Bird City; R. M. Owensby, Mankato; L. W. Patzkowsky, Kiowa; E. B. Scagnelli, Dodge City; R. R. Snook, McLough; E. F. Steichen, Lenora; C. R. Svoboda, Chapman; M. H. Waldorf, Jr., Greensburg; T. L. Wayland, Nashville; H. O. Williams, Cheney; E. D. Yoder, Denton.

School Health

C. M. Barnes, Seneca, Chairman; W. F. Bernstorf, Winfield; J. A. Butin, Chanute; W. H. Crouch, Topeka; D. B. Foster, Topeka; E. D. Greenwood, Topeka; L. E. Haughey, Concordia; H. P. Jubelt, Manhattan; P. C. Laybourne, Kansas City; H. Lutz, Augusta; W. C. Menninger, Topeka; F. D. Murphy, Lawrence; R. R. Snook, McLough; L. N. Speer, Kansas City.

Stormont Medical Library

W. Mau, Topeka, Chairman; M. D. Morris, Topeka; N. V. Treger, Topeka.

Study of Heart Disease

G. L. Norris, Winfield, Chairman; D. R. Bedford, Topeka; E. G. Dimond, Kansas City; C. W. Erickson, Pittsburg; L. H. Leger, Kansas City; P. W. Morgan, Emporia; L. O. E. Peckenschneider, Halstead; M. Snyder, Salina; D. C. Wakeman, Topeka; G. B. Wood, Wichita.

Venereal Disease

H. W. Lane, Kansas City, Chairman; M. L. Bauman, Wichita; A. B. Harrison, Wichita; C. H. Murphy, Topeka; L. C. Murphy, Wichita.

Official Proceedings, 97th Annual Session

The 97th annual session of the Kansas Medical Society, held at Topeka, April 29 through May 3, was attended by 600 physicians, 125 guests (hospital administrators, technicians, nurses, etc.), 198 members of the Woman's Auxiliary to the Kansas Medical Society, and 199 members of the Kansas Medical Assistants' Society.

The program followed the outline published in the April issue of the JOURNAL, and the scientific sessions were well attended and well received. The social highlight of the week was the annual banquet held at the Topeka Country Club with Dr. Conrad M. Barnes, Seneca, presiding. An entertaining program was presented, climaxed by the administration of the oath of office to Dr. Clyde W. Miller, Wichita, president of the Society for 1956-1957.

An award which had been kept secret until the time of the banquet was presented to Dr. A. W. Fegtly, Wichita, for his distinguished service to the Society. He was given a plaque bearing the following words: "In grateful acknowledgment for outstanding service in the practice of medicine and to the medical profession, the Kansas Medical Society proudly presents this award to Arthur W. Fegtly, M.D., May 2, 1956."

An award for the best scientific exhibit was given to Dr. Alfred M. Tocker, Wichita, for his presentation entitled "Cardiac Arrest." The second prize went to Dr. Karl A. Youngstrom, of the University of Kansas Medical Center, for an exhibit on "Cerebral Arteriography," and the third award was given to Dr. J. Walker Butin and Dr. Thomas J. Luellen, Wichita, for their exhibit, "Fluid and Electrolyte Balance in Postoperative Cases." Dr. Manuel Sklar of Chicago, Dr. William C. Keettel of Iowa City, and Dr. Samuel Zelman, Topeka, judged the scientific exhibits.

FIRST SESSION, HOUSE OF DELEGATES

The first meeting of the House of Delegates of the 1956 session was held on Tuesday evening, May 1, at the Hotel Jayhawk, Topeka. Dr. Conrad M. Barnes, Seneca, president, presided.

In reporting the presence of a quorum, Dr. A. W. Fegtly, Wichita, announced the attendance of 71 delegates, 7 officers, 17 councilors, and 8 past presidents.

Dr. Donald P. Trees, Wichita, presented summaries of the councilor and committee reports published in the April issue of the JOURNAL. Supplementary reports were given by Dr. Francis T. Collins, Topeka, for the Committee on Public Relations; Dr. Glen E. Kassebaum, El Dorado, for the Committee on Medical Economics; Dr. A. W. Fegtly, for the Committee on Constitution and Rules; Dr. C. V. Black, Pratt, for the Committee on Endowment; Mr. Oliver E. Ebel, Topeka, for the Committee on Hospital Survey and for the Committee on Medical Assistants; Dr. Lucien R. Pyle, Topeka, for the Committee on Health Legislation and Healing Arts Act.

The report of the Committee on Necrology was submitted by Dr. Clyde W. Miller, Wichita.

Dr. Lloyd W. Reynolds, Hays, representing Blue Shield, showed slides to illustrate a $4,500 family income service plan and a $6,000 plan and introduced resolutions of approval.

In the absence of Dr. William H. Algie, chairman of the Committee on Postgraduate Study, Dr. Barnes read a supplementary report for that group.

The Meade County Medical Society requested permission to separate from the Seward County Medical Society.

A resolution from the Marion County Medical Society, asking Blue Cross and Blue Shield participation in a plan to provide medical care for welfare clients, was introduced by Dr. Peter D. Ens, Hillsboro.

Dr. Orville R. Clark, editor of the JOURNAL, presented his annual report. He was given a bound copy of the issues published in 1955 in recognition of his services.

In his address as executive secretary, Mr. Oliver E. Ebel recommended participation in science fairs and health workshops as public relations projects for the Society. Mr. Rueben M. Dalbec, executive assistant, suggested formation of a committee on federal legislation and outlined a plan to educate school children on health matters by sponsorship of first aid projects and essay contests.

The constitutional secretary, Dr. James A. Butin, Chanute, reported total membership in the Society as 1,842. This includes 1,303 paid members, 183 honorary, 68 on leave of absence, 28 in service, and 260 delinquent in dues.

The auditor's report was the treasurer's report.

Dr. L. S. Nelson, Sr., Salina, and Dr. George F. Gsell, Wichita, delegates to the American Medical Association, gave reports. Additional information about the A.M.A. was presented by Dr. James R. McVay, Kansas City, Missouri, trustee for this district.

A guest, Dr. Dwight H. Murray of Napa, California, president-elect of the A.M.A., then addressed the meeting. He spoke on legislative efforts of the

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6. **Domiciliary care of decubitus ulcers.**
7. **Care of premature infants.**

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SEARLE

A.M.A. and the work of the Committee on Hospital Accreditation.

Dr. Barnes gave a brief presidential report. He announced also that Governor Fred Hall had notified him earlier of two appointments to the Kansas State Board of Medical Registration and Examination, Dr. Harvey L. Bogan of Baxter Springs and Dr. Frederick E. Wrightman of Sabetha.

The message of the president-elect, Dr. Clyde W. Miller, followed.

The meeting was then opened for introduction of items of new business. Dr. L. S. Nelson asked consent for immediate action on a matter of urgency, the sending of telegrams to senators and representatives in Washington in opposition to H.R. 7225. The consent was given and the telegrams were dispatched.

Dr. Ralph G. Ball, Manhattan, for the Riley County Medical Society, introduced a resolution recommending that the legislature of Kansas appropriate funds for construction of a new Student Health Center at Kansas State College.

A resolution changing the name of the Committee on Hospital Survey to the Committee on Survey and Accreditation of Hospitals was introduced by Dr. Barrett A. Nelson, Manhattan.

Dr. Francis X. Lenski, Jr., Iola, introduced a resolution regarding medical society politics.

Dr. Barnes reported that all items of business introduced would be considered on the following day by a reference committee and would be acted upon at a second House of Delegates meeting on Thursday. He asked Dr. Floyd C. Taggart of Topeka, Dr. Norton L. Francis, Wichita, and Dr. Lloyd W. Reynolds, Hays, to serve on the reference committee and announced the time and place of the committee meeting.

SECOND SESSION, HOUSE OF DELEGATES

Dr. Conrad M. Barnes, Seneca, president, called to order the second meeting of the House of Delegates for 1956 after a 12:30 luncheon at the Hotel Jayhawk, Topeka, on Thursday, May 3. The presence of a quorum was announced by Dr. A. W. Fegtly, Wichita, who reported the attendance of 73 delegates, 7 officers, 14 councilors, and 7 past presidents.

Dr. Norton L. Francis, Wichita, gave the first portion of the report of the reference committee. The committee's recommendation that councilor reports be accepted as published in the JOURNAL was approved.

A resolution introduced by the Central Kansas Medical Society, recommended for adoption by the reference committee, was approved as follows:

Be it resolved that the Ellsworth County physicians be transferred from their present assignment in District No. 9 to that of Councilor District No. 13, thereby including Ellsworth County in the same councilor district as Hays and Russell Counties.

The reference committee did not approve a resolution introduced by the Nemaha County Medical Society, providing for a change in the succession of officers in case of death of the president. The House of Delegates voted to make no change in this regard.

The request of the Meade County Medical Society to separate from Seward County was linked, in the reference committee report, with a recommendation that the Council study the condition of small county societies with a view toward combining some of these into multi-county societies, with new charters to be issued by the Council to each component group. The reference committee report was adopted.

A long discussion preceded action on a request from the Committee on Hospital Survey concerning public medical institutions. Although the reference committee recommended adoption of the request, the House voted to return the matter to the Committee on Hospital Survey for further study.

A proposal from the Committee on Medical Assistants, that an educational course of the circuit type be conducted during the coming year, was approved by the reference committee and by the House.

A standard insurance medical report form was discussed. A motion that the Kansas Medical Society should not buy copyrighted forms was approved, along with a recommendation that each individual physician should pay for his own insurance blanks.

The reference committee approved a project of the Committee on Medical Economics, and the House approved also. This provides for a life insurance program for members of the Society without proof of insurability if 60 per cent of the eligible members choose to participate. Under this plan, through the American United Life Insurance Company, the Society will receive 5 per cent of the premiums in exchange for taking care of collections.

Accepting the recommendation of the reference committee, the House approved a plan under which the Committee on Medical Economics will negotiate with insurance carriers for improved health and accident contracts.

A resolution introduced at the Tuesday meeting by the Marion County Medical Society was withdrawn in favor of a resolution submitted by the Committee on Medical Economics. Both covered the subject of medical care for the indigent. The reference committee recommended adoption of the resolution and the House concurred. The resolution follows:

WHEREAS, The Riley County Medical Society has

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for 20 years, and up to the present time, carried an insurance program for physician care only, and

WHEREAS, The Saline County Medical Society has within the past few weeks negotiated a contract for $7.50 per person per month, in which hospitals, druggists, and physicians are paid on a percentage basis, and

WHEREAS, In spite of the above, the State Board of Social Welfare still insists that the maximum shall be $6.50 per person per month, and that the contract must include hospital, drugs, and physicians' services, therefore be it

Resolved, That the entire matter of indigent health care be referred to each county medical society with the recommendation that negotiations be opened with county commissioners on a local basis. And, be it further

Resolved, That an effort be made to establish the contract on the basis that it shall cover physician care only, or, if it includes hospital and drug costs, that the three services shall be apportioned on a specific percentage for each.

Approval was given by the reference committee and by the House of Delegates to a suggestion of the Committee on Public Relations, that a copy of the Colorado Code of Cooperation between Medicine and News Agencies be sent to each component society in Kansas for study and adoption where it appears applicable.

A second suggestion of the Committee on Public Relations, regarding preparation of "an average fee schedule for the average conditions to the average patient," was not approved by the reference committee and was not adopted by the House.

The reference committee commended the Committee on Rural Health for its efforts to bring the National Rural Health Conference to Kansas in 1959 and recommended that the House of Delegates extend an invitation to the American Medical Association to hold the conference in Wichita in 1959. The recommendation was accepted by the House. Mr. Aubrey Gates, field secretary for the A.M.A. Council on Rural Health, a guest at the meeting, then expressed his hope that the invitation will be accepted.

The work of a special committee which has been studying the Kansas Medical Practice Act was approved by the reference committee and by the House.

Establishment by Blue Shield of a $4,500 family income plan was recommended by the reference committee and approved by the House. Discussion of a $6,000 family income plan was limited to whether or not such a plan is desired at this time. The House voted to omit consideration of such a program.

Dr. Floyd C. Taggart, chairman of the reference committee, presented the remainder of the committee report. He stated that the committee approved the work of the editor of the JOURNAL, Dr. Orville R. Clark, and extended him a vote of thanks. The House of Delegates concurred.

A recommendation that the Kansas Medical Society and its component groups assist in the development of science fairs throughout the state was approved by the reference committee and by the House.

The establishment of an essay contest was next considered. The reference committee recommendation, that the matter be referred to the Committee on Public Relations, was approved.

In reporting on a suggestion that a committee be appointed to study legislation, the reference committee felt that the officers of the Society are now handling this responsibility in a satisfactory manner. The committee recommended that no change be made, and the House approved.

The reference committee and the House accepted the report of the constitutional secretary, adding an expression of gratitude to Dr. James A. Butin for his work.

After studying the auditor's report, the reference committee recommended that the balance now remaining in the Student Union Fund be sent to the American Medical Education Foundation, marked for the University of Kansas School of Medicine for use at the Student Union Building.

A recommendation of the reference committee that $3,500 from the Graduate Education Fund be sent to the American Medical Education Foundation, marked for the University of Kansas School of Medicine for use in graduate education, was approved by the House of Delegates.

In approving the treasurer's report, the reference committee added an expression of thanks to Dr. John L. Lattimore for "this and the many other services he has been and is continually giving to this Society." The House applauded to express its approval.

A motion made by the chairman of the reference committee, that the supplementary report of the Committee on Endowment be accepted with commendation for Dr. C. V. Black's outstanding effort in behalf of A.M.E.F., was accepted by the House. Future solicitations for A.M.E.F. are to be conducted by the councilor of each district.

A rising vote of thanks was extended to Dr. Conrad M. Barnes, retiring president, and a vote of confidence and a pledge of assistance were given Dr. Clyde W. Miller, incoming president.

The reference committee agreed with the spirit of a resolution introduced by the Riley County Medical Society, concerning construction of a new health center at Kansas State College, but felt that action

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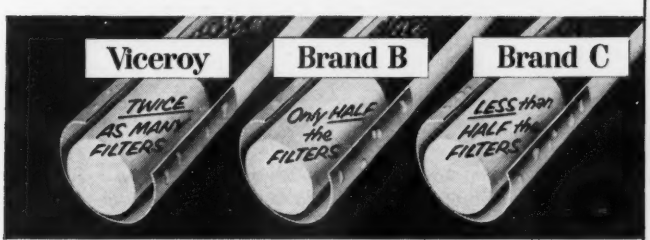

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of approval would be contrary to the policy of the Society. The committee recommended that individual members of the Society obtain the support of their legislators for this purpose, and the House voted approval.

A resolution introduced at the Tuesday meeting concerning accreditation of hospitals was not approved by the reference committee. That group recommended that the president assign this subject to a specific committee for study, and the House of Delegates approved.

While agreeing with the purpose of a resolution regarding medical society politics, the reference committee favored taking no action since the policy and practice of the Kansas Medical Society make it unnecessary. A motion to that effect carried.

Election of officers was next on the agenda. Those chosen by the House of Delegates are listed elsewhere in this issue.

A resolution of thanks to the Shawnee County Medical Society for its efforts in arranging the 1956 annual session was approved.

Dr. D. E. Eckart, Hutchinson, extended an invitation to the Society to hold its 1960 meeting in Hutchinson.

The meeting was concluded with the introduction of the new president, Dr. Clyde W. Miller.

OFFICERS FOR 1956-1957

President ..... Dr. Clyde W. Miller, Wichita
President-Elect ..... Dr. Barrett A. Nelson, Manhattan
Immediate Past-President .. Dr. Conrad M. Barnes, Seneca
First Vice-President .... Dr. Thomas P. Butcher, Emporia
Second Vice-President .. Dr. Glenn R. Peters, Kansas City
Constitutional Secretary
..... Dr. George E. Burket, Jr., Kingman
Treasurer ..... Dr. John L. Lattimore, Topeka
A.M.A. Delegate 1955-1956 .. Dr. L. S. Nelson, Sr., Salina
A.M.A. Delegate 1956-1957 .. Dr. George F. Gsell, Wichita
A.M.A. Delegate 1957-1958 .. Dr. Lucien R. Pyle, Topeka
A.M.A. Alternate 1955-1956 .. Dr. Lucien R. Pyle, Topeka
A.M.A. Alternate 1956-1957 .. Dr. Floyd C. Taggart, Topeka
A.M.A. Alternate 1957-1958 .. Dr. Norton L. Francis, Wichita
Chairman of Editorial Board .. Dr. Orville R. Clark, Topeka

COUNCILORS FOR 1956-1957

1. Dr. Frederick E. Wrightman, Sabetha, term expiring in 1957
2. Dr. Glenn R. Peters, Kansas City, 1958
3. Dr. H. Penfield Jones, Lawrence, 1957
4. Dr. Charles E. Vestle, Humboldt, 1958
5. Dr. Severt A. Anderson, Clay Center, 1957
6. Dr. James A. McClure, Topeka, 1959
7. Dr. Edward J. Ryan, Emporia, 1959
8. Dr. James E. Hill, Arkansas City, 1957
9. Dr. L. S. Nelson, Jr., Salina, 1957
10. Dr. Harold M. Glover, Newton, 1959
11. Dr. Norton L. Francis, Wichita, 1958
12. Dr. Albert C. Hatcher, Wellington, 1959
13. Dr. Lloyd W. Reynolds, Hays, 1958
14. Dr. Justin A. Blount, Larned, 1958
15. Dr. Lyle G. Glenn, Protection, 1958
16. Dr. James L. Jenson, Colby, 1959
17. Dr. H. Preston Palmer, Scott City, 1957

NOMINATING COMMITTEE

Five past presidents of the Society were elected by the House of Delegates to name candidates for office in May 1957. Dr. Murray C. Eddy, Hays, will serve as chairman. Other committee members are: Dr. Clarence H. Benage, Pittsburg; Dr. Oscar W. Davidson, Kansas City; Dr. Noble E. Melencamp, Dodge City, and Dr. W. M. Mills, Topeka.

EDITORIAL BOARD

Dr. Orville R. Clark, Topeka, was reappointed chairman of the Editorial Board and editor of the JOURNAL at a meeting of the Council held on May 3. Four other Topeka physicians will also serve on the board: Dr. John A. Segerson, newly appointed for a three-year term, Dr. David E. Gray, Dr. Richard Greer, and Dr. Dwight Lawson.

Thirteen physicians from different geographical areas of the state have accepted appointment to an Editorial Advisory Board. Their duties will be to write and solicit editorials, scientific papers, news notes, and book reviews, assist in the formulation of policies, and act as liaison between the JOURNAL and physicians throughout the state.

The following are now serving on the Editorial Advisory Board: Dr. Virgil E. Brown, Sabetha; Dr. Vernon E. Wilson, Kansas City; Dr. J. G. Hughbanks, Independence; Dr. C. J. W. Wilen, Manhattan; Dr. John L. Morgan, Emporia; Dr. G. E. Kassebaum, El Dorado; Dr. Richard O'Donnell, Ellsworth; Dr. Victor R. Moorman, Hutchinson; Dr. Donald P. Trees, Wichita; Dr. J. A. Howell, Wellington; Dr. Murray C. Eddy, Hays; Dr. J. A. Blount, Larned, and Dr. Dale D. Vermillion, Goodland.

REPORT OF EDITOR OF THE JOURNAL

During the past year your Editorial Board has consisted of Dr. John W. Cavanaugh, Dr. David E. Gray, Dr. Richard Greer, and Dr. Dwight Lawson, with the writer serving as editor and with Dr. Vernon E. Wilson of Kansas City and Dr. Donald P. Trees of Wichita as associate editors.

In physical size the JOURNAL has continued to grow. From 852 pages two years ago, and 928 one year ago, we have now had 968 pages in the current year. I hope that an increase in size has also meant an increased usefulness to the Society.

The total of 37 scientific articles published during the last year is a little lower than for previous years, but this has been brought about by the fact that two issues have not included scientific material. The December issue was devoted to subjects of economic interest, chiefly related to building (and keeping) an estate, and the March issue, though following the tradition of being the University of Kansas issue,

clinically proved in many common infections[1-60]

Hemolytic streptococcal infections

Pharyngitis/Tonsillitis/Sinusitis
Otitis media/Mastoiditis
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References: 1. Boger, W. P., J. Amer. Ger. Soc. 3:556, Aug. 1955. 2. Lapin, J. H., Ann. Allergy 13:169, March-April 1955. 3. Andelman, M. B. and Fischbein, W. I., Antibiotic Med. 1: 136, March 1955. 4. Statements of American Heart Association, Council on Rheumatic Fever and Congenital Heart Disease, Circulation 11:317, Feb. 1955. 5. Miller, J. M. et al., Antibiotics Annual 1954-55, Medical Encyclopedia Inc., N. Y., p. 105. 6. Seal, J. R. et al., J. Lab. & Clin. Med. 44:831, Dec. 1954. 7. Martin, W. J. et al., Am. Pract. & Dig. Treat. 5:813, Oct. 1954. 8. Henner, R., Eye, Ear, Nose & Throat Monthly 33:530, Sept. 1954. 9. Rodstein, M. and Young, D., Clin. Med. 61:695, Sept. 1954. 10. Bernstein, S. H. et al., A. M. A. Arch. Int. Med. 93:894, June 1954. 11. Craige, E., North Carolina M. J. 14:593, Dec. 1953. 12. Barach, A. L., J. Amer. Ger. Soc. 1:616, Sept. 1953. 13. Barach, A. L., Geriatrics 8:423, Aug. 1953. 14. Boger, W. P., Indus. Med. & Surg. 22:288, July 1953. 15. Young, D. and Rodstein, M., J.A.M.A. 152:987, July 1953. 16. Queries and Minor Notes, J.A.M.A. 152:1083, July 1953. 17. Roberts, E., A. M. A. Amer. J. Dis. Child. 85: 643, June 1953. 18. Spink, W. W., J.A.M.A. 152:585, June 1953. 19. Huang, N. N. and High, R. H., J. Pediat. 42:532, May 1953. 20. Antibiotics: Round Table Discussion, Pediatrics 11:270, March 1953. 21. Feinberg, B., Rhode Island M. J. 36: 138, March 1953. 22. Flippin, H. F., Delaware State M. J. 25: 55, March 1953. 23. Denny, F. W. Jr., Postgrad. Med. 13:153, Feb. 1953. 24. Flood, J. M., A. M. A. Arch. Dermat. & Syph. 67:42, Jan. 1953. 25. Kohn, K. H., Milzer, A. and MacLean, H., J.A.M.A. 151:347, Jan. 1953. 26. Siegal, S. et al., J. Allergy 24:1, Jan. 1953. 27. Statements of American Heart Association, Council on Rheumatic Fever and Congenital Heart Disease, J.A.M.A. 151:141, Jan. 1953. 28. Keefer, C. S., Pennsylvania M. J. 55:1177, Dec. 1952. 29. Kerrell, W. E., J.A.M.A. 150:1450, Dec. 1952. 30. Levy, D. F., Connecticut State M. J. 16:899, Dec. 1952. 31. Romansky, M. J. and Kelser, G. A., J.A.M.A. 150:1447, Dec. 1952. 32. Thomas L., Minnesota Med. 35:1105, Dec. 1952. 33. Jones, C. C., J. Iowa M. Soc. 42:533, Nov. 1952. 34. Reimann, H. A., Postgrad. Med. 12:255, Sept. 1952. 35. Bunn, P. A., N. Y. State J. Med. 52:2005, Aug. 1952. 36. Finland, M., New England J. Med. 247:557, Oct. 1952. 37. Babione, R. W. et al., U. S. Armed Forces M. J. 3:973, July 1952. 38. Hansen, A. E., South. M. J. 45:423, May 1952. 39. Dowling, H. F., G. P. 5:53, Feb. 1952. 40. Rhoades, P. S., G. P. 5:67, Feb. 1952. 41. Dowling, H. F. and Lepper, M. H., Med. Clin. North Amer., Jan. 1952, p. 247. 42. Karelitz, S. and Schifrin, N., Postgrad. Med. 11:17, Jan. 1952. 43. Panel Discussion, Pennsylvania M. J. 55:42, Jan. 1952. 44. Flippin, H. F. et al., J.A.M.A. 147:918, Nov. 1951. 45. Massell, B. F., Mod. Concepts Cardiovas. Dis. 20:105, Sept. 1951. 46. Weinstein, L., Boston Med. Quarterly 2:1, Sept. 1951. 47. Massell, B. F. et al., J.A.M.A. 146:1469, Aug. 1951. 48. Finland, M., Bull. New York Acad. Med., 27:199, April 1951. 49. Wheatley, D., Brit. M. J. 1:703, March 1951. 50. Keefer, C. S., Postgrad. Med. 9:101, Feb. 1951. 51. Bunn, P. A. et al., J.A.M.A. 144: 1540, Dec. 1950. 52. Weinstein, L. and Perrin, T. S., J. Pediat. 47:844, Dec. 1950. 53. Keefer, C. S., Am. J. Med. 7:216, Aug. 1949. 54. Robinson, J. A., Hirsch, H. L. and Dowling, H. F., Am. J. Med. 4:716, 1948. 55. Barach, A. L. and Garthwaite, B., Ann. Allergy 5:297, Aug. 1947. 56. Herrold, R. D., J. Urol. 57:897, May 1947. 57. White, H. J., Lee, M. E. and Alverson, C., Proc. Soc. Exper. Biol. & Med. 62:35, 1946. 58. Baumann, F. et al., J. Allergy 17:264, Sept. 1946. 59. Gamble, T. O. et al., Am. J. Obst. & Gynec. 50:514, Nov. 1945. 60. Woofter, A. C. and Hoffman, O. E., J. Iowa M. Soc. 35:189, May 1945.

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consisted this year of reports of the activities of the various departments of the School of Medicine. Those articles which we would ordinarily have published in March will be distributed through the coming issues.

We have continued our policy of publishing clinicopathological conferences, tumor conferences, and student theses from the University of Kansas Medical Center.

Our situation in regard to available scientific articles is better than in recent years, and I believe that we have prospects of a continuation of a better status. The publication of two special issues without scientific articles has been a factor in accumulating some reserve supply, as has the fact that several authors have submitted more than one article—either together or nearly so. Much of our fertile source of supply of articles from the state as a whole is, however, as yet untapped.

We have made arrangements with the University of Kansas Medical Center which we expect will make possible the publication of some of the many excellent presentations made in the various postgraduate courses and in special lectureships there. Some of these are being recorded on tape, from which we will make transcriptions preparatory to their subsequent publication. It does involve a considerable amount of effort, particularly in making the transcriptions and editing them, but we have high hopes that it will permit the presentation of interesting material for the JOURNAL. I would particularly like to express my appreciation to Dean Wescoe, Dr. Wilson, and Mr. Nelligan, whose cooperation has made this possible.

Our printing is still being done by The Ovid Bell Press, Inc., of Fulton, Missouri, and our relationships have continued to be most satisfactory.

This noon we had the first meeting of the Editorial Board expanded by the addition of a new Editorial Advisory Board. This Advisory Board is being organized with the hope that by having interested representatives in various geographical sections of the state, we will be able to more truly present the type of JOURNAL which is desired by members of the Society. I hope, and I believe, that these newly acquired representatives of the JOURNAL will be of material assistance in promoting our interests over the state.

I will make no attempt to present a full financial report to this group, for I am sure you do not want to listen to it, and I do not think it necessary. If any desire to have details, they are available; for the present I will state that the bank balance is $2,248.73 larger than it was a year ago. I take no personal credit for this accomplishment.

I certainly owe a great deal of appreciation to the members of the Editorial Board for all that each has done to carry on JOURNAL activities. Their work is done behind the scenes and is not known to most of you, but I assure you that they have all read numerous manuscripts for critical evaluation and have made decisions on policy, changes of format which became effective during the year, etc.

At this time Dr. Cavanaugh's term is expiring, and after having been on the board for six years he has requested that he not be reappointed. It is with regret that we must comply with his sincere request, for he has demonstrated both interest and loyalty to the JOURNAL over these years, and his contribution will be missed.

Dr. Wilson is a newcomer to the JOURNAL family, having taken over the work formerly done by Dr. Glen Shepherd at the university. He deserves special recognition for collecting and editing the material from the university, particularly the March issue. I feel that Dr. Trees' efforts are in some part responsible for the Wichita group contributing a larger segment of our published papers than any other area, and I thank him for that.

You all know how efficiently and quietly both Oliver Ebel and Rueben Dalbec accomplish the Society work they do, and the same may be said of their JOURNAL activities—no fanfare and no glory, but the accomplishment of all there is to do. Of course the one who really bears the brunt of the work in the JOURNAL office is Miss Pauline Farrell, and after the years during which she has worked for the JOURNAL it becomes difficult to find new ways of expressing appreciation of her work. Her loyalty to the JOURNAL is unquestioned, and her patience with my procrastinations and shortcomings is still difficult to understand—but easy to appreciate. You all understand what a good assistant can do to promote a smoothly and efficiently run doctor's office, and Miss Farrell accomplishes exactly that for the JOURNAL. These three have made it a pleasure to continue my association with this activity of our Kansas Medical Society.

KANSAS BLUE SHIELD

Dr. Francis T. Collins, Topeka, was chosen to serve as president of Kansas Blue Shield at the annual meeting of the Board of Directors held at the Blue Cross-Blue Shield building in Topeka on Sunday, April 29.

Other officers elected were: first vice-president, Dr. L. E. Filkin, Concordia; secretary-treasurer, Dr. Edward J. Ryan, Emporia; second vice-president, Dr. James Fisher, Wichita. Dr. L. W. Reynolds, Hays, is immediate past president.

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The following trustees will serve on the Board during the coming year as representatives of the Medical Councilor Districts:

District 1, Dr. E. T. Wulff, Atchison
District 2, Dr. P. E. Hiebert, Kansas City
District 3, Dr. Monti L. Belot, Lawrence
District 4, Dr. Francis X. Lenski, Jr., Iola
District 5, Dr. Robert M. Carr, Junction City
District 6, Dr. Lucien R. Pyle, Topeka
District 7, Dr. Edward J. Ryan, Emporia
District 8, Dr. Max Wells, Winfield
District 9, Dr. H. S. Dreher, Salina
District 10, Dr. H. M. Glover, Sr., Newton
District 11, Dr. James Fisher, Wichita
District 12, Dr. Paul M. Hulett, Anthony
District 13, Dr. A. M. Cherner, Hays
District 14, Dr. S. T. Coughlin, Larned
District 15, Dr. E. B. Scagnelli, Dodge City
District 16, Dr. Floyd Smith, Colby
District 17, Dr. G. R. Hastings, Great Bend

Dr. Clyde W. Miller, Wichita, president of the Kansas Medical Society, and Dr. Barrett A. Nelson, Manhattan, president-elect, will also serve on the board.

Lay members are: Ernest Bird, Protection; Russell Mosser, Lawrence; Joe Reilly, Pittsburg; H. P. Reynolds, Moline; B. L. Humphreys, Hutchinson, and John Junior Armstrong, Muscotah.

Positions on the Blue Shield Board are filled from these categories: one doctor from each of the seventeen councilor districts; the officers of the corporation (elected by the board); the president and president-elect of the Kansas Medical Society; the immediate past president of Blue Shield; four lay members elected by the Blue Cross-Blue Shield State Members' Committee, and two lay members appointed by the governor of Kansas.

EYE, EAR, NOSE AND THROAT SECTION

President—Dr. Larry L. Calkins, Kansas City
Vice-President—Dr. Max S. Lake, Salina
Secretary—Dr. Victor R. Moorman, Hutchinson

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President-Elect—Dr. Bruce P. Meeker, Wichita
Vice-President—Dr. Henry B. Sullivan, Sr., Shawnee
Secretary-Treasurer—Dr. Cloyce A. Newman, Topeka
Delegate—Dr. George L. Thorpe, Wichita
Alternates—Dr. Lawrence E. Leigh, Overland Park, and Dr. Floyd E. Dillenbeck, El Dorado

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Vice-President—Dr. Harold F. Spencer, Emporia
Secretary—Dr. William F. Powers, Wichita
Treasurer—Dr. Joseph E. Gootee, Topeka

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President-Elect—Dr. Charles D. Shrader, Newton
Vice-President—Dr. Edward X. Crowley, Wichita
Secretary-Treasurer—Dr. Robert Sohlberg, Jr., McPherson

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Vice-President—Dr. Harry R. Wahl, Kansas City
Secretary-Treasurer—Dr. Bert E. Stofer, Wichita

KANSAS STATE PEDIATRIC SOCIETY

President—Dr. David R. Davis, Emporia
Vice-President—Dr. Charles T. Hinshaw, Wichita
Secretary-Treasurer—Dr. Theodore E. Young, Winfield

A meeting of the society will be held in Emporia on September 8. Dr. Horace Hodes, clinical professor of pediatrics at the College of Physicians and Surgeons, Columbia University, New York, will be speaker.

KANSAS RADIOLOGICAL SOCIETY

President—Dr. Abraham M. Cherner, Hays
Vice-President—Dr. Lewis G. Allen, Kansas City
Secretary-Treasurer—Dr. George S. Ripley, Jr., Salina

KANSAS UROLOGICAL SOCIETY

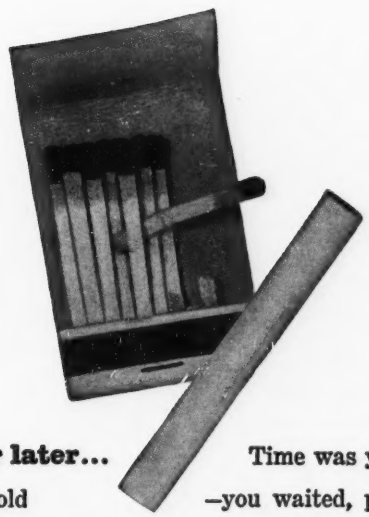
Chairman—Dr. Harold F. O'Donnell, Wichita
Secretary—Dr. D. Cramer Reed, Wichita

Urologists of Kansas met to consider organization of a Kansas Urological Society and agreed to form such an association. It is expected that 20 charter members will be present at the first meeting of the group in Wichita next May during the annual session of the Kansas Medical Society.

KANSAS ORTHOPEDIC CLUB

President—Dr. John A. Grove, Newton
Secretary-Treasurer—Dr. Henry O. Marsh, Wichita

At the meeting of the Kansas Orthopedic Club, Mr. L. M. Vance, of the Kansas Crippled Children Commission, discussed the program of that organization. Dr. Paul C. Williams, Dallas, discussed "Lumbosacral Pathology and Treatment." The program was followed by a cocktail hour at the Topeka Country Club and an open house at the home of Dr. Joseph T. Gendel.



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Second Vice-President—Mrs. Edward D. Greenwood, Topeka
Third Vice-President—Mrs. Chester L. Young, Kansas City
Recording Secretary—Mrs. Wayne O. Wallace, Atchison
Treasurer—Mrs. Louis G. Graves, St. John
Corresponding Secretary—Mrs. F. Carter Newsom, Wichita

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President-Elect—Hope Finley, Hutchinson
Vice-President—Edna Crosson, Lyons
Secretary—Ruth Seiverling, Wichita
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Councilor, District 3—Irene W. Dierking, El Dorado
Councilor, District 4—Bernice Goetz, Hays
Councilor, District 5—Virginia Brown, Larned

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Vice-Chairman—Mr. John Polson, Hertzler Clinic, Halstead
Secretary-Treasurer—Mr. W. M. Birthelmer, Wichita Clinic, Wichita

SPORTS EVENTS

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Vice-President (Golf)—Dr. George F. Gsell, Wichita
Vice-President (Trap)—Dr. George L. Gill, Sterling
Secretary-Treasurer—Dr. Frederick L. Ford, Topeka

Monday during the week of the annual session was given over to sports events, and prizes were awarded at a sportsmen's banquet held at the Topeka Country Club that evening. Golf winners were as follows:

Championship Flight—Dr. Fred N. Bosilevac, Kansas City; Dr. Ed Ashley, Chanute; Dr. John F. Coyle, Coffeyville; Dr. H. Penfield Jones, Lawrence; Dr. A. W. Bradford, Overland Park; Dr. William L. Pratt, Leavenworth; Dr. Robert K. Purves, Wichita, and Dr. J. Robert Weaver, Wichita.

First Flight—Dr. Jack E. Moseley, Wichita; Dr. Roger P. Weltmer, Beloit; Dr. Arthur L. Ashmore, Wichita; Dr. George F. Gsell, Wichita; Dr. M. D. Morris, Topeka; Dr. Herbert L. Bunker, Junction City; Dr. Eldon W. Christman, Wamego, and Dr. William L. Padgett, Wichita.

Second Flight—Dr. George H. Keene, Wichita; Dr J. D. Gough, Chanute; Dr. Leo K. Crumpacker, Wichita; Dr. Leslie E. Knapp, Wichita; Dr. Hervey R. Hodson, Wichita; Dr. D. Paul Trimble, Emporia; Dr. Will D. Pitman, Pratt, and Dr. Henry B. Sullivan, Shawnee.

Third Flight—Dr. Leeman C. Joslin, Harper; Dr. George E. Milbank, Wichita; Dr. Howard U. Kennedy, Topeka; Dr. Charles S. Fleckenstein, Onaga; Dr. Richard C. Tozer, Topeka; Dr. Mac F. Frederick, Wichita; Dr. William H. Crouch, Topeka, and Dr. Harold R. Smith, Lincoln.

Fourth Flight—Dr. Ray A. West, Wichita; Dr. William M. Scales, Hutchinson; Dr. William O. Martin, Topeka; Dr. Lloyd G. Schwartz, Topeka; Dr. Richard S. Roberts, Ottawa; Dr. Donald R. Pierce, Topeka; Dr. Lucien R. Pyle, Topeka; Dr. George L. Norris, Winfield, and Dr. James A. McClure, Topeka.

Prizes for the sports events were given as follows: Golden Hour clock, Abbott Laboratories; Mr. and Mrs. Calobar sunglasses, American Optical Company; diagnostic kit, Ames Company, Inc.; lighter and cuff links, Armour Laboratories; golf balls, Baxter Laboratories; cigarette lighters, Ciba Pharmaceutical Products; golf balls, Coe Surgical Supply Company.

Vaporizer, DeVilbiss Company; golf balls, Doho Chemical Corporation; table lighters, Dumas-Wilson and Company; golf balls, Eaton Laboratories; golf balls, Eli Lilly and Company; Surgiset assortment, Ethicon, Inc.; electric timer, General Electric Company; golf grips, Hoffmann-LaRoche, Inc.; golf balls, W. E. Isle Company; gift sets, Marcelle Cosmetics, Inc.; gift certificate and golf balls, S. E. Massengill Company; golf balls, William S. Merrill Company; merchandise credit, Mid-West Surgical Supply Company, Inc.; physician's bags, Munns Medical Supply Company, Inc.; golf balls, Ortho Pharmaceutical Corporation; case of Instant Nonfat Powder, Pet Milk Company.

Golf club covers, William P. Poythress and Company; golf balls, A. H. Robins Company, Inc.; steak knives, Smith, Kline and French Laboratories; book, *A History of Medicine,* Charles C Thomas, Publisher; Cary thermometer, U. S. Vitamin Corporation; lighters, Upjohn Company; prize booklet,

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White Laboratories, Inc.; golf balls, Wyeth, Inc. Additional prizes were contributed by Borden Company and Burroughs Wellcome and Company.

Flying Physicians Association

Seven of the 25 Kansas physicians who are known to be pilots were present at a meeting held in Topeka on May 2 to discuss plans for a state affiliate of the Flying Physicians Association. The group planned a breakfast meeting in Hutchinson on May 27 to perfect organization and to elect officers.

Dr. Robert O. Brown, Atchison, will represent Kansas at a national meeting to be held in Chicago, June 11 to June 15, during the meeting of the American Medical Association.

The purposes of the Flying Physicians Association are: (1) education in aero medical problems; (2) encouragement of already licensed pilots to increase proficiency and win higher ratings; (3) campaign for more protective devices such as safety harnesses, "delethalized" instrument panels, and crash-resistant fuselages; (4) provide airplane and accident insurance plans for the benefit of members to eliminate penalties on life insurance policies for private flying; (5) standardization of medical aviation tax deductions; (6) provide a medium through which regional and national fly-ins are planned for meetings and social functions.

Membership in Kansas is open to any physician who holds a pilot's license and belongs to the Kansas Medical Society. Dues for the state organization have not yet been determined. On the national basis, charter memberships are available for $10. An additional $15 will entitle the contributor to the status of "Founding Member" and will give the group funds for operation and expansion.

Questions about the organization may be sent to Dr. Lyle G. Glenn, Protection, Kansas.

Survey by Health Information Foundation

A recent survey of public attitudes on many matters of interest to the medical profession was conducted by the Health Information Foundation of New York. Some of the findings, as reported to the American Medical Association, follow.

Forty per cent of the adult population believe food costs are much too high; 45 per cent believe repair charges for work on television sets and cars are excessive; 27 per cent are critical of clothing costs, and only 26 per cent believe that the cost of medical care is much out of line.

Although medical costs in general come in for less criticism than other elements of the cost of living, within the category of medical costs the percentage believing costs "much too high" for doctors' fees is 16 per cent; hospital charges, 39 per cent; dentists' fees, 24 per cent; prescriptions, 38 per cent.

Fifty-six per cent could not give the name of one company that manufactures a new or "wonder" drug. To the question, "What people or groups do you think have been mainly responsible for these new 'wonder' drugs?" only 11 per cent of the respondents could give specific credit to drug companies, pharmaceutical houses, or the chemical industry. Nine per cent mentioned laboratories, 23 per cent credited doctors, the American Medical Association, or groups of doctors, and 40 per cent credited scientists or such persons as medical researchers and chemists.

We are in the early period of great fundamental advances in biochemistry. These will surely have profound impact, not only upon our knowledge of disease, but also upon the methods of diagnosis.

Reactions which may be brought about in the various physical states make it possible to introduce radioactive atoms as tracers into the most complex and delicate molecules. One can visualize that the diagnostic approach of the physician of the next 25 to 50 years will revolve around the quantitative measurement of the behaviour of specific enzyme systems. The laborious and crude chemical techniques of today will be replaced by precise and rapid procedures of far more discriminating character through the introduction of radioactive atoms into highly specialized compounds of physiological importance.

In our future medical schools, the teaching will of necessity emphasize the dynamic characteristics of intra-cellular reactions which can be observed in the living state without injury to the individual. The morphological concept of disease, as useful and valuable as it is, will become more and more secondary to that of disease as a functional alteration of a vital mechanism.—*Dr. John C. Bugher, Director, Division of Biology and Medicine, United States Atomic Energy Commission.*

The decline in mortality from tuberculosis has been proportionally greater in women than men, adding to the already existing inequality in the number of living men and women in the late years of life. Men, however, have been dying from tuberculosis at a later age than formerly, neutralizing some of the discrepancy, while adding years to their own productive period of life.—*Esmond R. Long, M.D., Bull. Hist. of Med. July-Aug., 1954.*

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Spontaneous Arterial Thrombosis

Development in the Internal Carotid Artery

R. GLENN SNODGRASS, M.D., ***Portsmouth, Virginia***

Since the introduction of cerebral angiography as a diagnostic method, the occurrence of spontaneous thrombosis of the internal carotid artery has become increasingly evident. In 1937 Moniz and his coworkers[7] published the first clinical report of four cases. In all the condition had been mistaken for a space-occupying lesion and diagnosed only by angiography. Fourteen years later, in 1951, when Johnson and Walker[5] published their collective review, they were able to assemble 101 cases and added six of their own. Since then the condition has been reported with increasing frequency.

It is apparent that, although only recently recognized as a clinical entity, this is not an uncommon disorder. It is also probable that the incidence would be much higher if all patients with hemiplegia were investigated by cerebral angiography.

At present most cases which are discovered are those in which the clinical picture resembles a brain tumor or intracranial vascular anomaly and which are submitted to arteriography. Diagnostic methods used at present avoid fruitless search for other causes of the neurologic syndrome, but a technique of treatment has yet to be devised which will make diagnosis of the condition imperative.

CASE REPORTS

Case 1, D. E., a 44-year-old male truck driver, was admitted to the University of Kansas Medical Center April 14, 1953, because of sudden collapse and hemiplegia. For the past 15 years he had had "migraine" headache. These headaches occurred more frequently and had been more severe during the past three to four months. He had not complained of headache for several days before admission. On the day of admission, while climbing into a truck, he suddenly became unconscious for a period of 15 minutes. On regaining consciousness he was unable to speak or move his right arm and leg. His past history included duodenal ulcer for 24 years, managed medically.

On physical examination he exhibited a pronounced aphasia, mainly expressive in nature. He was able to carry out simple verbal commands. A right homonymous hemianopsia was demonstrable by gross confrontation. A right flaccid hemiplegia was present with diminished to normal deep tendon reflexes and a Babinski response on the right. Except for the hemianopsia, examination of the cranial nerves disclosed no abnormalities. The fundi were normal. Pin prick appreciation appeared to be impaired in the right leg. It was impossible to test other forms of sensation. Urinalysis showed a 2 plus sugar. Other laboratory work showed normal findings.

During the first week in the hospital he became more responsive and was able to answer "yes" and "no" to questions but could not speak an intelligible sentence. On April 22, 1953, a left carotid arteriogram was done, showing filling of the external carotid artery only. Injection was repeated with the same result. The needle was then withdrawn, and the artery was repunctured low in the neck. Injection of Diodrast at this site again showed no filling of the internal carotid.

On May 5, 1953, the left carotid artery was explored under procaine anesthesia and found to be thrombosed down to the bifurcation of the common carotid. The vessel was incised, and an old thrombus was partially removed. His subsequent course showed a gradual improvement. He became able to say a few words. His hemiplegia became spastic. He was dismissed from the hospital to receive physiotherapy.

Case 2, W. L., a 46-year-old man, was admitted to the hospital August 10, 1954, because of failing vision and hemiplegia. He first began to have headaches nine months previously and reported they had been more frequent and severe since May 1954. For two months he complained of failing vision and seeing double. He staggered at times and frequently walked into objects. His family had noted a personality change within the last five months; he had become increasingly irritable. On August 6, 1954, he suddenly lost control of his car and ran into a wall. He was found by the police, conscious but unable to move his left arm or leg. He was also mentally confused. He was taken to his local hospital and transferred four days later. Skull films and spinal fluid were reported to be normal.

On admission to the hospital he was drowsy, disoriented, and euphoric. There was a profound left hemiplegia, more severe in the left arm. There was marked left central facial weakness and a left homonymous hemianopsia, determined by confrontation. The left pupil was dilated with homatropine, and the

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This is one of 11 theses, written by fourth year students at the University of Kansas School of Medicine, selected for publication by the Editorial Board from a group judged to be the best by the faculty at the school. Dr. Snodgrass is now serving his internship at the United States Naval Hospital, Portsmouth, Virginia.

BETTER

results are obtained with STERANE[1]—3 to 5 times more active than hydrocortisone or cortisone.

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1. Johnston, T. G., and Cazort, A. G.: J. Allergy 27:90, 1956. 2. Schwartz, E.: New York J. Med. 56:570, 1956. 3. Schiller, I. W., et al.: J. Allergy 27:96, 1956.

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disc showed early papilledema. There was a sensory deficit over the left side of the body to pin prick and light touch. Laboratory studies were normal.

In view of the clinical picture and physical findings, a frontal lobe tumor was suspected. Consequently a right carotid arteriogram was done as an emergency procedure. This showed an occlusion of the internal carotid artery about 0.5 cm. distal to the bifurcation (Figure 1). His condition remained unchanged. On

Figure 1. Right carotid arteriogram showing occlusion of the internal carotid artery distal to the bifurcation of the common carotid artery.

the eighth hospital day a pneumoencephalogram was done which showed impaired filling of the occipital horn on the right. He was discharged August 21, 1954, unimproved.

Case 3, H. W., a 38-year-old farmer, was admitted to the hospital February 15, 1955, because of weakness of the left arm and difficulty in speaking. He had been in good health until one and one-half months before admission when he was seized by a sudden attack of numbness of the entire left upper extremity, most marked in the hand. This episode lasted about 30 minutes, during which time there was no paralysis of the limb. During the next three weeks he had about 20 similar attacks, in some of which a numbness over the left chest was noted. He also noticed, during this time, a tendency to forget things he had done. In mid-January his left arm began to get progressively weaker, and numbness was present continuously. He awoke on January 17 confused and unable to speak or to move his right arm. At that time he was hospitalized for three weeks. His weakness and aphasia gradually improved, but he was unable to spell or read as well as before. The numbness of his left upper extremity had persisted, and two days before this admission he had noticed rapid twitching of the eyelids and blurring vision. Spinal fluid during his hospitalization elsewhere was reported to contain blood. At no time did he have headache.

On physical examination there was noted a distinct weakness of the left arm, about 50 per cent of normal, and fine motor movements were impaired. Reflexes of the left arm were hyperactive, and there was a positive Hoffman's sign on the left. There was no weakness of the left leg or face. His speech was hesitant and his ability to calculate or spell was poor. He omitted one letter in spelling his own name. There was no impairment of sensation, and the cranial nerves were normal. Routine laboratory studies were normal. Electroencephalography and spinal fluid were also normal. On February 17, 1955, a right carotid arteriogram showed thrombosis of the internal carotid artery about 1 cm. above the bifurcation (Figure 2). He was released unimproved.

ETIOLOGY

Males are affected by this condition more than five times as often as females.[5] There is a definite predilection for the 30- to 60-year age group although King and Langworthy[6] described a case in a seven-year-old boy in whom thrombosis of the right internal

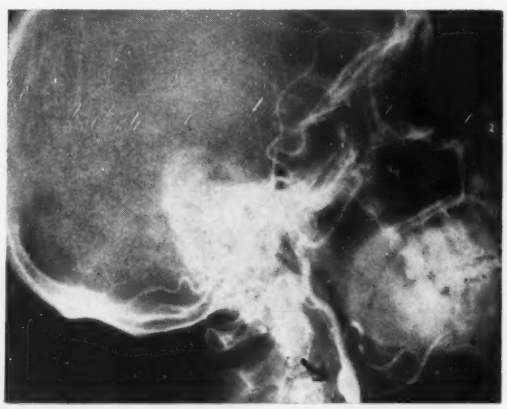

Figure 2. Right carotid arteriogram. The arrow indicates the point of occlusion of the internal carotid artery.

carotid artery developed three weeks after pneumonia. There is a definite tendency for the thrombosis to involve the left side more often than the right. Sixty-five per cent of cases reviewed by Johnson and Walker[5] involved the left side.

The most common etiology reported in the literature is arteriosclerosis. Galdston,[3] Webster,[13] and others have found atherosclerosis in a resected portion of the involved artery.

Thromboangiitis obliterans has been considered the second most common cause. Fisher[2] believes the evidence for cerebral thromboangiitis obliterans, as recorded in the literature, is inconclusive and states

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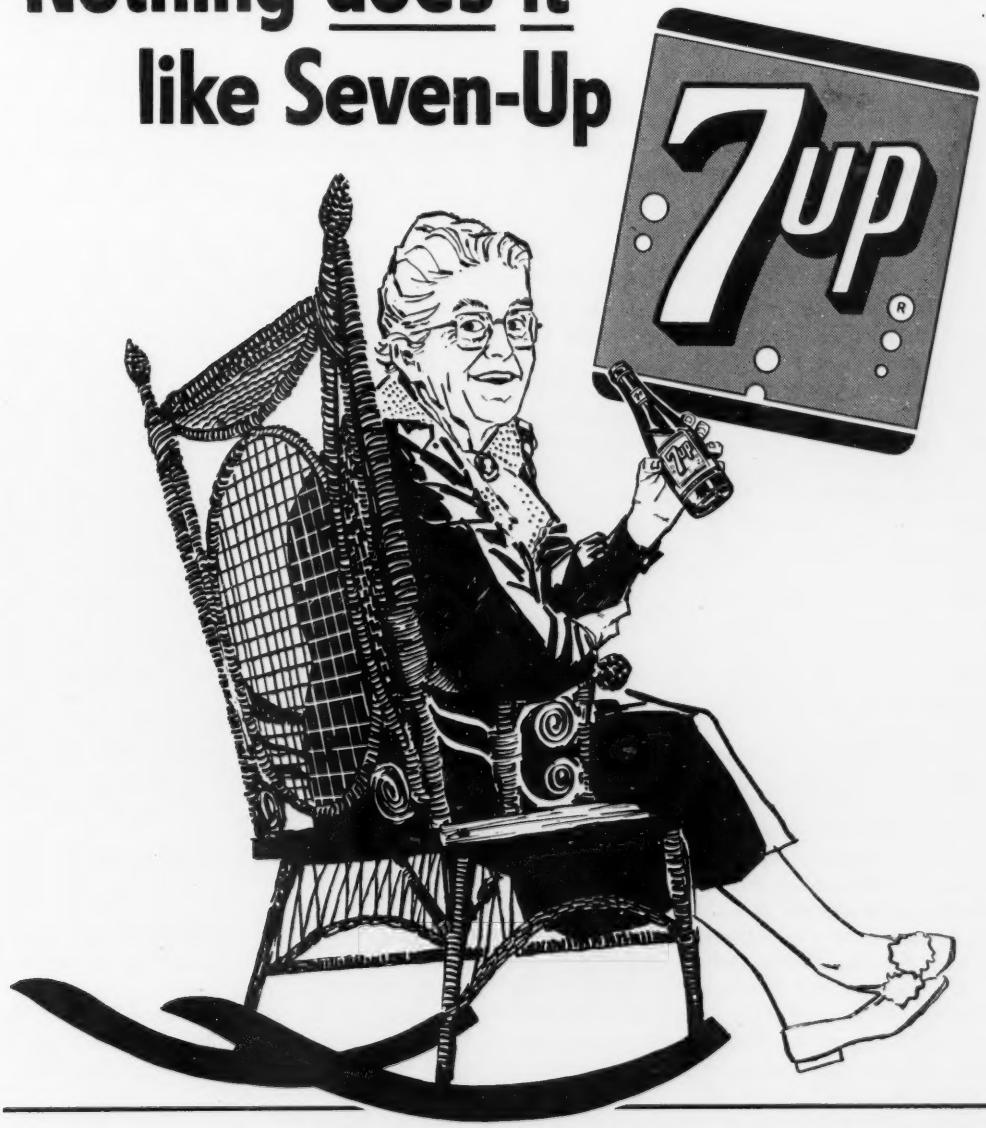

The All-Family Drink

"further proof is necessary before thromboangiitis obliterans of the carotid and cerebral arteries can be accepted."

Gurdjian[4] reported a case in which occlusion of the middle cerebral artery was demonstrated by arteriography. One and one-half years later the patient suffered a "stroke," and repeat angiography showed the occlusion to be in the neck, suggesting retrograde extension of the thrombus.

Aneurysm of the aortic arch has been considered as a possible etiologic agent in this condition.[3] King[6] has described a case associated with a long-standing traumatic aneurysm of the innominate artery. Retrograde thrombosis from an intracranial aneurysm has also been considered.

SYMPTOMS AND DIAGNOSIS

The basic features of spontaneous occlusion of the internal carotid artery are headache, hemiplegia, and aphasia. Although the basic pattern is fairly constant, the actual clinical picture is highly variable. Considering that the blood supply of an entire cerebral hemisphere is concerned, we would expect a wide variety of neurologic symptoms. It is also probable that thrombosis can occur with few or no symptoms, for surgical ligation of the carotid artery can be done in many cases without harm.[10, 12] The onset of the patient's illness usually follows one of three different patterns.

1. Sudden apoplectic onset. Patients in this group may experience without warning a severe headache with rapid onset of hemiplegia and aphasia if the dominant hemisphere is affected. There is usually loss of consciousness, and there may be sensory disturbances.

2. Slowly progressive course. This picture closely resembles that encountered in brain tumors in which the clinical course is one of slow gradual progression of symptoms. There is frequently a history of severe headaches of several months to several years duration. Paresthesias and weakness may appear. Some degree of mental regression and speech impairment is common. A rapid increase in symptomatology usually occurs just before the patient seeks medical care.

3. Transient attacks. Transient attacks were encountered in 40 per cent of cases reviewed by Johnson and Walker[5] and in the 25 cases reported by Poppin and Baird.[8] These are characterized by a sudden onset of symptoms which last from a few minutes to an hour and clear either suddenly or gradually. Some residuals may persist until the next attack which may occur days, weeks, or months later. The most common symptoms are headache, paresis, paresthesias, and aphasia. Also reported are transient attacks of dizziness, unilateral blindness, unconsciousness, and focal seizures. Not infrequently such a series of transient attacks is terminated by a sudden apoplectic onset of hemiplegia and aphasia.

Hemiparesis is the most constant finding, occurring in approximately 80 per cent of cases reviewed by Johnson and Walker.[5] The degree of weakness is variable, but the hemiplegia most often has its onset and is most severe in the hand, spreading to involve the arm, leg, and perhaps the face. Associated with hemiplegia there may be a severe cortical sensory impairment.

Headache has been reported in more than 50 per cent of cases[5] and was present in two of the cases reported here. Headache may be mild or severe; it may be localized to the affected side, but more often it is generalized and frequently precedes any other symptoms. The diagnosis of migraine is frequently made in these patients.[2]

In contradistinction to the motor disturbances, which are practically always present, objective impairment of discriminative cortical sensation is a variable finding. Often there is a slight disturbance; however, in those cases with sudden severe hemiplegia, all sensation may be involved.

Both receptive and expressive aphasias frequently are encountered. These may be present as prodromal symptoms or associated with hemiplegia. Rarely aphasia may be present in right-handed patients on occlusion of the right internal carotid artery.[9] According to the data compiled by Johnson and Walker,[5] it was present in 60 per cent of cases.

Ophthalmologic features may be a homonymous hemianopsia demonstrable at the time of the "stroke." Primary optic atrophy with unilateral blindness is not uncommon. More unusual changes are diplopia, ptosis, and papilledema.

Emotional changes occur in about 15 per cent of cases, manifested usually as depression and irascibility with marked deterioration of mental function. Twenty per cent of patients have convulsive attacks, and one-half of these are focal in nature.

Fisher[2] believes that palpation for carotid pulsations is of great value, especially a short time after the major stroke. Pulsation in the external carotid artery is said not to be confusing if high palpation is done, for the external carotid artery soon divides into many small branches.

Dunning[1] recently reported a method of pharyngeal palpation of the internal carotid and considered that absence of pulsation, as determined by this method, identifies the condition.

The only certain methods of making the diagnosis are carotid arteriography and surgical exposure of the vessel in the neck. Shapiro and Peyton[9] consider the following arteriographic findings strong evidence for occlusion of the carotid artery:

1. A conical narrowing of the dye before it stops, resulting in a short stump of the internal carotid artery.

2. Failure to fill the internal carotid artery and a

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1. Cronheim, G., and Toekes, I. M.: Comparison of Sedative Properties of Single Alkaloids of Rauwolfia and Their Mixtures, Meet. Am. Soc. Pharmacol. & Exper. Therap., Iowa City, Iowa, Sept. 5, 1955.

2. Moyer, J.H.; Dennis, E., and Ford, R.. Drug Therapy (Rauwolfia) of Hypertension. II. A Comparative Study of Different Extracts of Rauwolfia When Each Is Used Alone (Orally) for Therapy of Ambulatory Patients with Hypertension, A.M.A. Arch. Int. Med. 96:590 (Oct.) 1955.

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LOS ANGELES

defect in the column of dye produced by the thrombus.

3. Retrograde flow of dye in the common carotid artery and, on the right side, the flow of dye through the innominate artery into the vertebral artery resulting in a vertebral arteriogram.

4. Irregularities in the diameter of the vessel and narrowing of the vessel.

Failure to fill the internal carotid artery after repeated attempts must be interpreted with reservation since it may be due to technical difficulties.

TREATMENT

Several forms of treatment have been attempted but none has been encouraging. Strully and coworkers[11] were able to remove a recent thrombus of the internal carotid artery for a distance of 7 cm. by suction catheter, but they failed to remove the clot completely. Poppin and Baird[8] routinely did an immediate continuous procaine stellate block by polyethylene tube in patients suspected of having thrombosis of the internal carotid artery. When the diagnosis was confirmed by angiography, the artery was explored. If no pulsations were present, they excised a portion of the internal carotid artery and the superior and middle cervical ganglia. This treatment was based upon the thought that impulses arising at the site of the local vascular disease cause reflex spasm of smaller cerebral vessels. Their results, however, were not encouraging. Wolfe[14] has found recanalization of the thrombus, suggesting that excision should not be done.

Prolonged use of anticoagulants has been tried with the hope that recanalization will take place before the occurrence of the final disastrous occlusion.

SUMMARY AND CONCLUSIONS

The etiology, symptoms, diagnosis, and treatment of spontaneous thrombosis of the internal carotid artery have been presented. The cause of this condition appears to be arteriosclerosis in most cases. A positive diagnosis can be made only by arteriography or operation. Treatment is unsatisfactory.

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ANNOUNCEMENTS

Scientific and clinical session, American Congress of Physical Medicine and Rehabilitation, The Ambassador, Atlantic City, September 9-14. Open to members of the A.M.A. Information may be obtained from the Congress, 30 North Michigan Avenue, Chicago 2, Illinois.

Eight-week course in occupational medicine, Post-Graduate Medical School of New York University-Bellevue Medical Center, September 10-November 2. Information is available from Dean, N.Y.U. Post-Graduate Medical School, New York 16, New York.

Applications now being accepted for 1957 Part I examinations of American Board of Obstetrics and Gynecology. Deadline, October 1. Information may be secured from Dr. Robert L. Faulkner, 2105 Adelbert Road, Cleveland 6, Ohio.

Annual assembly in otolaryngology, University of Illinois College of Medicine, October 1-7. Information available from the Department, 1853 West Polk Street, Chicago 12, Illinois.

Annual convention, National Society for Crippled Children and Adults, Hotel Statler, Washington, D. C., October 28-31. Programs may be secured from the Society, 11 South LaSalle Street, Chicago 3, Illinois.

Fourth Interim Congress, Pan American Association of Ophthalmology, Hotel Statler, New York City, April 7-10, 1957. Information is available from Dr. Frank H. Constantine, 30 West 59th Street, New York 19, New York.

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THE MONTH IN WASHINGTON

Editor's Note. The following summary of Washington news was prepared by the Washington office of the A.M.A. for distribution to state and regional medical journals.

As might be expected, a presidential commission's report on veterans' pensions that also goes into the subject of non-service connected medical benefits is stirring up another controversy.

The President's Commission on Veterans Pensions, headed by Gen. Omar Bradley, World War II leader and postwar Veterans Administrator, conducted a study covering more than a year in time and a wide range of subjects. It produced a 415-page report and a total of 70 recommendations.

The seven-man commission's report has this basic premise: military service in time of war or peace should be treated as discharging an obligation of citizenship and not of itself as a basis for future government benefits.

The commission made this additional point: ". . . under conditions of modern technology and warfare, the national defense might be served equally well by a civilian in a scientific laboratory or a war plant as by a uniformed serviceman—and in view of total war and atomic weapons, perhaps with greater personal hazard to the civilian. This further suggests that the special needs that veterans have because of military service should not be confused with the needs that all citizens have in common for such things as education, health services, and economic security."

With this in mind, the commission proposes the gradual elimination of non-service connected benefits and observes: "Their justification is weak and their basic philosophy is backward looking rather than constructive." Such benefits, it adds, should be limited to a minimum level and retained only as a reserve line for veterans who fail to qualify for basic protection under Old Age and Survivors Insurance (Social Security).

The commission then goes one step further by recommending an end to the present automatic "presumption of service-connection" procedure. Now, presumption of service connection is automatic and mandatory for certain diseases if the condition is diagnosed within a specific period of time following discharge. Instead, the commission would substitute medical determination for chronic and tropical diseases, psychoses, tuberculosis, and multiple sclerosis, with each case decided on its own merits.

Other recommendations: (1) increased reliance on the OASI system for certain veterans' benefits, (2) prompt counseling of all veterans placed on compensation rolls as to VA and federal-state rehabilitation programs, and (3) requirement of reasonable medical or surgical treatment before payment of compensation.

Representatives of veterans groups called before the House Veterans Affairs Committee to comment on the Bradley study complained that some of its proposals would be "extremely destructive" to certain aspects of veterans' compensation.

Two committees of Congress, after long studies of problems of narcotics, barbiturate and amphetamine addiction, have come up with recommendations that the U. S. tighten penalties on narcotics peddling and smuggling, outlaw heroin, and set up a central unit in the Federal Bureau of Narcotics to keep track of known addicts. The proposals were made by the Senate Judiciary Committee and a House Ways and Means Subcommittee.

The House committee also suggested a law for more stringent controls over barbiturates and amphetamines.

The Senate committee rejected the proposal backed by the New York Academy of Medicine for "clinics" where known addicts could go for regular doses of narcotics.

U. S. Public Health Service is advising private physicians as well as health officers to increase their use of Salk poliomyelitis vaccine. Although supplies now lag behind demand, the expectation is that before the summer is out the situation will be reversed. In line with this recommendation, PHS is urging that physicians use what supplies they have on hand immediately, depending on future production to take care of second and third shots.

Because the President signed the military career incentive bill promptly, physicians in uniform received their pay raises starting May 1. The minimum boost (after two years' service) is $50 per month, the maximum (after 10 years) $150.

Private-profit nursing homes, hospitals, and some other medical facilities soon will have an opportunity to obtain U. S. loans from the Small Business Administration. The limit is $250,000 per project, the interest rate usually 6 per cent.

If there was any question about it, the AFL-CIO as a joint organization favors national compulsory health insurance, as each group did before the merger. The AFL-CIO stand was taken officially for the unions by Nelson Cruikshank in testimony before the House Ways and Means Committee on a bill for increased payments for the medical care of public relief recipients.

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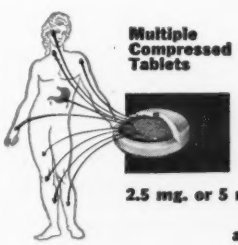

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COUNTY SOCIETIES

Panel discussions have formed the programs for two recent meetings of the Wyandotte County Medical Society. "Medical Press Relations" was the subject discussed on April 19 by Mr. Conwell Carlson and Mr. R. E. Sisney of the *Kansas City Star,* Mr. Cyril G. Scott of the *Kansas City Kansan,* Mr. Lee Vaughan of the legal profession, Dr. Francis J. Nash, and Dr. William T. Sirridge. Dr. Maurice Ryan was moderator.

At a meeting on May 15 Dr. Frederic Speer was moderator. "Hospital Chaplaincy" was the subject for the participants, the Rev. John J. Lacy of Providence Hospital and the Rev. Donald C. Houts of Bethany Hospital.

Members of the Riley County Society were entertained at a smorgasbord dinner at the Wareham Hotel recently by members of the Riley County Auxiliary.

A meeting of the Central Kansas Medical Society was held at Hays on May 17. Dr. Tom Gray, Wichita, spoke on "Dermatoses of the Hand," and Dr. John W. Warren, Wichita, discussed "Carcinoma of the Prostate." Members of the Auxiliary were guests of the physicians for a dinner after the scientific program.

Growth of Blue Cross

The largest enrollment growth since 1950 was recorded by Blue Cross during 1955, according to the plan's annual report issued last month. More than 3,000,000 persons were enrolled during the year just past. Membership in the plan now includes nearly one out of every three persons in the United States.

Ford Foundation Grant Program

A $10,000,000 program of matching grants to the National Fund for Medical Education has been announced by the Ford Foundation. The grants will be made on a matching basis over a five-ten-year period with a maximum limit in any one year of $2,000,000.

Last year the National Fund, which distributes monies raised by A.M.E.F. and contributions from industry and the general public, received $2,147,000 in unearmarked funds for distribution to the nation's medical schools. Of this amount, $422,812 came from the medical profession. Under the Ford Foundation formula, if receipts are of equal size in 1956, a Ford grant totaling 70 per cent of this amount, $1,503,486, would be made. All contributions in excess of the 1955 total would be matched dollar for dollar, subject to the maximum of $2,000,000.

The program could last for ten years but might be accelerated to completion in five years, depending upon the rate at which additional contributions are developed.

Cancer Research Grants to Kansans

Cancer research grants-in-aid to five University of Kansas Medical Center physicians were announced last month by the American Cancer Society.

Dr. Chauncey G. Bly, associate professor of pathology and oncology, received $6,500 for a project entitled "Tumor-Host Interactions in Animals." Dr. Harlan I. Firminger was granted $5,000 for studying "Correlation of Morphological and Biological Characteristics of Induced Liver Tumors in Rats." A sum of $4,255 was awarded Dr. Alvar A. Werder and Dr. Creighton A. Hardin for studying "The Influence of Humoral Factors on the Transplantability of Malignant and Non-Malignant Tissue." Dr. Max Beronbom received $6,400 for a program entitled "Mechanism of Azo Dye Carcinogenesis."

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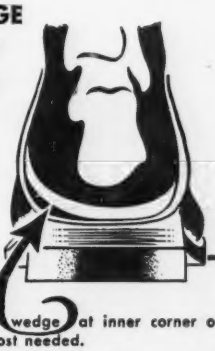

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BOOK REVIEWS

Therapy of Fungus Diseases: An International Symposium. Edited by Thomas H. Sternberg, M.D., and Victor D. Newcomer, M.D. Published by Little, Brown and Company, Boston. 337 pages. Price $7.50.

This book consists of papers presented June 22-25, 1955, at the symposium held by the Division of Dermatology, Department of Medicine, and Medical Extension of the University of California at Los Angeles. It includes discussion of superficial and deep fungus infections as well as much laboratory research work.

Extensive work has been done on coccidioidomycosis and histoplasmosis with no cure as yet. Blastomycosis and sporotrichosis have responded well to therapy; nocardia has responded favorably; many other fungus diseases are also discussed.

Endemic areas of the various pathogenic fungi were discussed and soil studies under various climate conditions were performed, but no definite reason was found for the localization.

Fungus diseases of India, France, Argentina, Brazil, Mexico, the Philippines, and the Ukraine were also presented.

This book is interesting, especially so to those engaged in experimental and research investigations of fungus diseases.—*G.W.N.*

Vascular Surgery in World War II, Medical Department of the United States Army. Edited by Daniel C. Elkin, M.D., and Michael E. DeBakey, M.D. For sale by the Superintendent of Documents, U. S. Government Printing Office, Washington 25, D. C. Price $4.25 (buckram).

Vascular Surgery in World War II is one of a series of professional, clinical and technical volumes of the Medical Department of the United States Army published under the direction of the Office of the Surgeon General. This book of 437 pages is composed of 16 chapters. The authors of many of these chapters are surgeons well known in the field of vascular surgery in American medicine today.

There is included discussion of the management of arterial injuries in the acute and residual states. There is an excellent chapter on the evaluation of the vascular status in traumatic and non-traumatic lesions of the blood vessels. This text often advises techniques of procedures, types of incisions, and criteria for the selection of cases.

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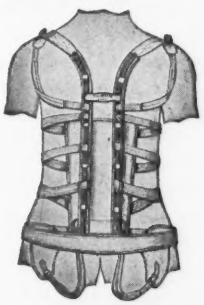

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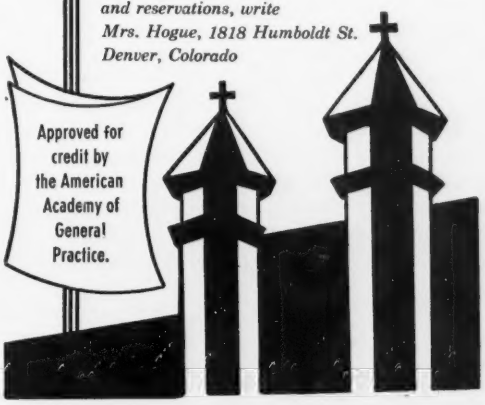

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World War II, and the summary of how and why these advancements were accomplished is detailed in this volume. It is a most interesting work and would be of extreme importance to every general surgeon as well as anyone doing vascular surgery.—*L.L.S.*

Progress in Health Services

Progress in Health Services is the name of a new monthly bulletin designed to interpret health statistics for laymen. It is published by Health Information Foundation, an organization sponsored by 200 companies in the drug, pharmaceutical, chemical, and allied industries.

"Although Americans have greatly benefited from the impressive strides made in the medical-health fields since 1900," said Mr. George Bugbee, president of the Foundation, "they nevertheless are not making full use of today's abundant health services and facilities. Bringing broader understanding of the value of medical care to the public is a responsibility of the health field which begins with a knowledge of what has been accomplished and what benefits already have accrued to us nationally.

"Full benefit from the wise use of medical care by everyone requires better knowledge of the great strides in health which have come through scientific developments and improved techniques of treatment such as new drugs and modern surgery. The value of medical care should be so well understood that the average American will seek his physician's advice in time to gain the most from the treatment prescribed."

Gain in Graduate Medical Education

Training programs for newly-graduated doctors have become as big—in terms of enrollment and time spent—as basic medical school education, it was reported recently by the Council on Medical Education and Hospitals of the A.M.A. Enrollment of young physician graduates as interns and residents for the 1954-1955 year passed that of students in undergraduate medical schools.

The council's annual report showed 9,066 graduates serving internships and 20,494 serving as residents, a total of 29,560 in 1,364 hospitals. The average cash stipend paid to interns by hospitals affiliated with medical schools is $87 a month. Hospitals not affiliated with schools pay $136 a month on the average.

Federal hospitals, such as armed services or Veterans Administration institutions, offer 36.5 per cent of all available intern positions and have the highest rate of filled positions.

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Pamphlets Available

A number of pamphlets of interest to physicians are available on request to the Kansas State Board of Health, Topeka. These pamphlets, purchased with tax funds and distributed without charge, include the following titles: *Maternal Care and Mental Health,* a WHO monograph; *Standards for Care of the Newborn,* American Academy of Pediatrics; *American Public Health Association Standards on Services to Handicapped Children, APHA Monograph on Well Child Supervision,* and others.

Of 1,200 women who graduated from medical school between 1925 and 1940, 49 per cent have been engaged in full-time practice since graduation. This compares with a percentage of 91 for men who were graduated during the same period. The figures were released recently by the John and Mary R. Markle Foundation which established a grant for a study of women in medicine.

Specialties of the women, in order of frequency, are: pediatrics, psychiatry, obstetrics and gynecology, and internal medicine. For men, surgery is most popular, followed by internal medicine and obstetrics and gynecology.

The study showed also that women physicians earn less than the men but in general work fewer hours per week. One-third of the women studied are unmarried. In the group of married women physicians, the common pattern is full-time practice for a period, followed by part-time practice or none at all.

The A.M.A.'s Committee on Medical Motion Pictures distributed more than 3,000 films last year to medical societies, medical schools, hospitals, and other professional groups. Newest addition to the library of pictures is a film entitled "The Doctor Examines Your Heart," prepared especially for the physician speaking before high school health classes or service clubs.

If one were to use as criteria the amount of life spoiled by disease, instead of measuring only that destroyed by death; or the number of days lost from pleasure and work because of so-called minor ailments; or merely the sums paid for drugs, hospitals, and doctors' bills, the toll exacted by microbial pathogens would seem very large indeed. Microbial diseases have not been conquered. Rather, scientists have resigned themselves to the belief that a relative protection against them can be had only at the cost of a huge ransom.—*Rene J. Dubos, Ph.D., J.A.M.A., April 23, 1955.*

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*Fishberg, A. M.: Hypertension and Nephritis, ed. 5, Philadelphia, Lea & Febiger, 1954, pp. 177-178.

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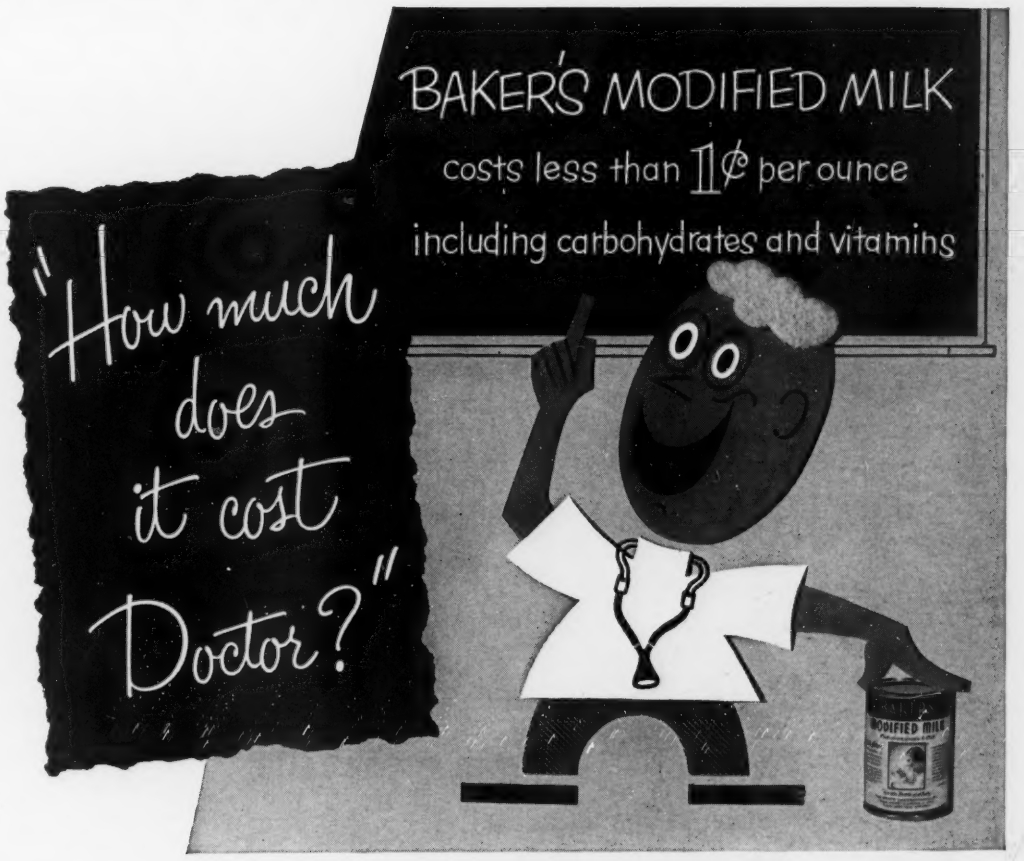
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1. Karp, M., et al.: Am. J. Obst. & Gynec. 69:780 (April) 1955.

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